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## Sports and Recreation Safety Fact Sheet (2015)

### Fatalities

- Between 2004 and 2009, there were 24 sports-related deaths in high school athletes.<sup>1</sup> There are no reliable statistics on the number of fatalities involving sports among younger children. However, researchers believe that traumatic brain injuries and sudden cardiac arrest are leading causes of death in young athletes.<sup>2,3</sup>
- 40 children died from 2001 through 2008 as a result of playground-associated injuries. The average age was 6 years old.<sup>4</sup>

### Injuries

- More than 2.6 million children ages 19 and under are seen in emergency departments for injuries related to sports and recreation each year.<sup>5</sup> This includes sports, such as football and basketball, as well as activities, such as playing on a playground, scooter riding and trampolining.<sup>5</sup>
- An estimated 712,700 children ages 19 and under were seen in emergency departments for injuries related to football or basketball in 2013.<sup>6</sup>

#### Estimated number of injuries by sport among children ages 19 and under, 2013<sup>6</sup>

Sport	Number of Injuries*
Football	354,300
Basketball	359,300
Soccer	171,000
Baseball	106,100
Softball	53,300
Wrestling	38,900
Cheerleading	35,200
Volleyball	34,700
Gymnastics	33,000
Track and field	23,900
Lacrosse	17,700
Ice hockey	11,200
Tennis	5,700
Field hockey	4,400

*\*Rounded to the nearest 100*



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## Additional Statistics

- 60 million children ages 6 to 18 participate in organized athletics.<sup>7</sup>
- The most common types of sport-related injuries among children are sprains (mostly ankle), muscle strains, bone or growth plate injuries, repetitive motion injuries and heat-related illness.<sup>8</sup>
- Children’s bones, muscles, tendons and ligaments are still growing, making them more susceptible to injury.<sup>9</sup>
- The four activities with the most injuries to bones and muscles include bicycling, basketball, football and roller sports.<sup>10</sup>
- Children who participate in two or more sports that emphasize the same body part (for example, swimmers and baseball pitchers) are at higher risk of overuse injuries than those who participate in sports with different muscle emphasis (for example, track and golf).<sup>11</sup>
- For boys and girls ages 9 and under, concussions happen most often while playing on a playground or when bicycling.<sup>5</sup>
- An estimated 395,274 high school athletes sustained concussions from 2005-2008.<sup>12</sup>
- For boys ages 10 to 19 years, concussions happen most often while playing football or bicycling, and girls most often get concussions playing soccer or basketball or while bicycling.<sup>5</sup>
- More than 90 percent of sports-related concussions occur without the loss of consciousness.<sup>13</sup>
- In high school sports that both boys and girls play, such as soccer and basketball, girls sustain a higher rate of concussions than boys.<sup>14</sup>
- Children are at increased risk of heat illness. Compared to adults, children have a lower sweating capacity and produce more metabolic heat per unit of mass during physical activities.<sup>15</sup>
- It is estimated that more than 9,000 high school athletes are treated for heat illness each year.<sup>16</sup>
- One in three children who play a team sport is injured seriously enough to miss practice or games.<sup>17</sup>
- Most organized sports-related injuries (62 percent) occur during practice rather than games.<sup>18</sup>

## References

- <sup>1</sup> Casa DJ (ed). (2012) *Preventing Sudden Death in Sport and Physical Activity*. Sudbury, MA: Jones & Bartlett Learning, p.9
- <sup>2</sup> American Association of Neurological Surgeons. Patient information: sports-related head injury. American Association of Neurological Surgeons Website; July 2010. Available at: <http://www.aans.org/patient%20information/conditions%20and%20treatments/sports-related%20head%20injury.aspx>. Accessed November 4, 2014.
- <sup>3</sup> 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(9): 702-707.
- <sup>4</sup> O’Brien C. Injuries and investigated deaths associated with playground equipment, 2001-2008. Bethesda, MD: Consumer Product Safety Commission; October 2009.
- <sup>5</sup> CDC MMWR. 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.
- <sup>6</sup> U.S. Consumer Product Safety Commission. National Electronic Injury Surveillance System (NEISS) injury data. NEISS estimates Query Builder Available from: <http://www.cpsc.gov/en/Research--Statistics/NEISS-Injury-Data/>. Accessed November 2014.
- <sup>7</sup> Straccolini A et al. A closer look at overuse injuries in the pediatric athlete. *Clin J Sport Med*. 2014. Epub online.
- <sup>8</sup> National Institute of Arthritis and Musculoskeletal and Skin Diseases. Childhood sports injuries and their prevention: a guide for parents with ideas for Kids. NIH Pub. 2006. 06-4821.
- <sup>9</sup> American Academy of Orthopaedic Surgeons. A guide to safety for young athletes. American Academy of Orthopaedic Surgeons Website. Available at: <http://orthoinfo.aaos.org/topic.cfm?topic=A00307>. Accessed November 4, 2014.
- <sup>10</sup> American Academy of Orthopaedic Surgeons. Recreational activities and childhood injuries. American Academy of Orthopaedic Surgeons Website. Accessed November 4, 2014. Available at: <http://orthoinfo.aaos.org/topic.cfm?topic=A00042>.
- <sup>11</sup> Brenner JS. Overuse injuries, overtraining, and burnout in child and adolescent athletes. *Pediatrics*. 2007. 119: 1242-1245.



<sup>12</sup> Yard EE, Comstock RD. Compliance with return to play guidelines following concussion in US high school athletes, 2005–2008. *Brain Injury*. 2009. 23(11): 888-898.

<sup>13</sup> Halstead ME, Walter KD, The Council on Sports Medicine and Fitness. Sport-related concussion in children and adolescents. *Pediatrics*. 2010. 126: 597-615.

<sup>14</sup> Gessel LM et al. Concussions among United States high school and collegiate athletes. *J Athl Train*. 2007. 42(4): 495-503.

<sup>15</sup> Howe AS, Boden BP. Heat-related illness in athletes. *Am J Sports Med*. 2007. 35(8): 1384-1395.

<sup>16</sup> Kerr ZY et al. Epidemiology of exertional heat illness among U.S. high school athletes. *Am J Prev Med*. 2013. 44(1): 8-14.

<sup>17</sup> Mickalide AD, Hansen LM. *Coaching Our Kids to Fewer Injuries: A Report on Youth Sports Safety*. Washington, DC: Safe Kids Worldwide, April 2012.

<sup>18</sup> National Youth Sports Foundation for the Prevention of Injuries, Inc. *Youth sports injuries factsheet, 1993*. National Youth Sports Foundation for the Prevention of Injuries, Inc.

Last updated February 2015. If you have a question about this factsheet, please call 202-662-0600.

