

# YOUTH SPORTS SAFETY STATISTICS

- There were 120 sports-related deaths of young athletes in 2008-2009; 49 in 2010; and 39 in 2011.<sup>1</sup>
- Approximately 8,000 children are treated in emergency rooms each day for sports-related injuries.<sup>2</sup>
- Among children, those aged 15-17 experience the highest emergency room visits for sports injuries.<sup>2</sup>
- Rates of sports injury visits to ERs were highest in remote rural settings.<sup>2</sup>
- High school athletes suffer 2 million injuries, 500,000 doctor visits and 30,000 hospitalizations each year.<sup>3</sup>
- There are three times as many catastrophic football injuries among high school athletes as college athletes.<sup>4</sup>
- History of injury is often a risk factor for future injury, making prevention critical.<sup>5</sup>
- 62 percent of organized sports-related injuries occur during practices.<sup>6</sup>
- Only 42 percent of high schools have access to athletic training services.<sup>1</sup>
- 47 percent of schools nationally fall short of the federally recommended nurse-to-student ratio. Many schools have no nurse at all.<sup>7</sup>
- 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.<sup>8</sup>

## **TRAUMATIC BRAIN INJURIES (CONCUSSIONS)**

- In soccer, the rate of concussions among girls was 68 percent higher than the rate of concussions in boys, and in basketball the rate of concussions among girls was 293 percent higher than the rate of concussion in boys.<sup>9</sup>
- During 2001-2009, an estimated 2,651,581 children aged  $\leq 19$  years were treated annually for sports and recreation-related injuries. Approximately 6.5 percent, or 173,285 of these injuries, were TBIs.<sup>10</sup>
- 400,000 brain injuries (concussions) occurred in high school athletics during the 2008-09 school year.<sup>11</sup>
- 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.<sup>12</sup>
- 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.<sup>12</sup>
- 15.8 percent of football players who sustain a concussion severe enough to cause loss of consciousness return to play the same day.<sup>13</sup>
- A 2011 study of U.S. high schools with at least one athletic trainer on staff found that concussions accounted for nearly 15 percent of all sports-related injuries reported to athletic trainers.<sup>14</sup>
- High school athletes who have been concussed are three times more likely to suffer another concussion in the same season.<sup>15</sup>
- Females aged 10-19 years sustained sports- and recreation-related TBIs most often while playing soccer or basketball or while bicycling.<sup>16</sup>
- More than 248,000 children visited hospital emergency departments in 2009 for concussions and other traumatic brain injuries related to sports and recreation.<sup>17</sup>
- 15 Injuries associated with participation in sports and recreational activities account for 21 percent of all traumatic brain injuries among children in the United States.<sup>18</sup>

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## **ASTHMA**

- Exercise-induced asthma affects 12-15 percent of the population.<sup>19</sup>
- It is estimated that 80 to 90 percent of all individuals who have allergic asthma will experience symptoms of exercise-induced asthma with vigorous exercise or activity. For teenagers and young adults this is often the most common cause of asthma symptoms.<sup>20</sup>

## **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.<sup>21</sup>
- 31 high school football players died of heat stroke complications between 1995 and 2009.<sup>22</sup>
- 64.7 percent of football players sustaining a heat illness were either overweight or obese.<sup>23</sup>
- The five year block from 2005 to 2009 had more heat stroke deaths than any other five year period in the past 35 years.<sup>24,25</sup>
- Exertional heat stroke has proven to be 100 percent survivable when immediately recognized and aggressively cooled on site.<sup>24</sup>
- The number of heat-related injuries from 1997 to 2006 increased 133 percent. Youth accounted for the largest proportion of heat-related injuries at 47.6 percent.<sup>26</sup>
- Two-thirds of kids show up for practice at least significantly dehydrated.<sup>27</sup>

## **SUDDEN CARDIAC ARREST**

- Sudden cardiac arrest (SCA) is the leading cause of death in exercising young athletes.<sup>28</sup>
- It's estimated that more than 95 percent of cardiac arrest victims die before reaching the hospital.<sup>29</sup>
- Just one in 10 U.S. student athletes who suffer sudden cardiac arrest survives.<sup>30</sup>
- The incidence of out-of-hospital sudden cardiac arrest in high school athletes ranges from .28 to one death per 100,000 high school athletes annually in the U.S.<sup>31</sup>

## **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*.<sup>32</sup>
- Young athletes with sickle cell trait may be at an increased risk of heat-related illnesses and their complications.<sup>33</sup>
- Predisposing factors to exertional sickling include heat, dehydration, altitude, asthma, high intensity exercise with few rest intervals.<sup>34</sup>

## **ANABOLIC-ANDROGENIC STEROIDS/DIETARY SUPPLEMENTS**

- 3.6 percent of high school students ever took steroids without a physician's prescription (2.9 percent of females and 4.2 percent of males).<sup>35</sup>
- More than 40 percent of boys in middle school and high school said they regularly exercised with the goal of increasing muscle mass.<sup>36</sup>
- Thirty-eight percent of these boys said they used protein supplements.<sup>36</sup>

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- Nearly six percent (5.9 percent) of those in the study said they had experimented with steroids.<sup>36</sup>
- Use of three more muscle modifying behaviors such as intake of protein supplements, steroids, changed eating, exercising, other muscle enhancing tactics, etc. was more than twice as high among boys who participated in sports vs. nonparticipants.<sup>36</sup>
- The occurrence of energy drink-related emergency department visits among adolescents and young adults shows that these vulnerable populations experience negative health events after consuming energy drinks. In 2011 there were 1,499 energy drink-related emergency department visits by 12-17 year olds.<sup>37</sup>

## CERVICAL SPINE INJURY

- Spinal cord injury in the United States is estimated to be 12,000 new cases each year.<sup>38</sup> Vehicle crashes constitute the most frequent cause for SCI,<sup>39</sup> at 42 percent. Sport participation constitutes the fourth most common cause (approximately 7.9 percent)<sup>39</sup> of spinal injuries and for those under the age of 30, is the second most common cause after motor vehicle crashes.<sup>40</sup> Approximately 80 percent of SCIs occur in males.<sup>38</sup>
- Football is associated with the highest number of cervical spine injuries of any sport, while cheerleading is associated with the highest frequency of direct catastrophic head and neck injuries for females.<sup>41</sup>
- There have been 47 football-related cervical spinal cord injuries with incomplete recovery between 2007 to 2011,<sup>42</sup> with seven cervical spine injuries in 2010 resulting in permanent disability.<sup>41</sup>
- Collegiate gymnastics and ice hockey have the highest incidence of direct catastrophic head and neck injury rates due to lower participation compared to football.<sup>41</sup>

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