



ASPE

ISSUE BRIEF

Common Sports Injuries: Incidence and Average Charges

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Significant health benefits are derived from sports and recreational physical activities. Many people, from young children to adults, participate in organized leagues and pickup games to play sports such as basketball, tennis, baseball, football and soccer. However, Americans frequently utilize the healthcare system for treatment of injuries resulting from everyday activities such as sports. Nearly 2 million people¹ every year, many of whom are otherwise healthy, suffer sports-related injuries and receive treatment in emergency departments. Some sports-related injuries, such as sprained ankles, may be relatively minor, while others, such as head or neck injuries, can be quite serious.

The most common basketball injuries, for example, are leg fractures, and ankle or knee sprains. More than 570,000 basketball injuries were treated in emergency departments in 2012. The average charges for an adult range from \$2,294 for a sprain to \$7,666 for an arm fracture (Table 1) – amounts that individuals without health insurance, especially those who were not expecting to have any medical expenses, may have trouble paying out of pocket. This issue brief describes the prevalence and cost of selected sports injuries.

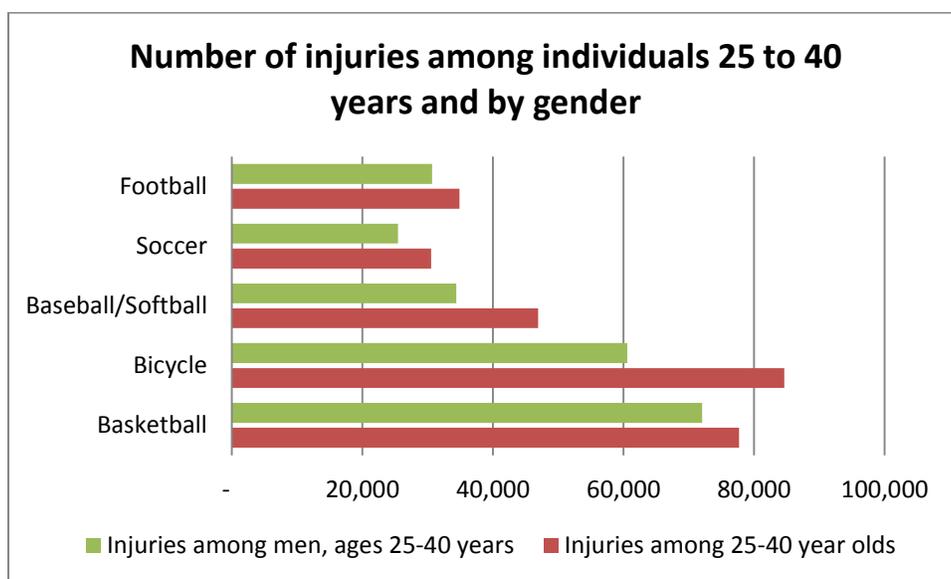
Injuries by Sport

According to the U.S. Consumer Product Safety Commission's National Electronic Injury Surveillance System (NEISS), more than 1.9 million individuals had a sports-related injury that was treated in emergency departments in 2012. By sport, there were:

- Nearly 570,000 basketball injuries were treated in emergency departments nationwide, including over 8,000 that resulted in hospitalization.
 - 93 percent of injuries were among men.

¹ NEISS Data Highlights – 2012. Consumer Product Safety Commission (CPSC), Bethesda, MD

- Nearly 557,000 bicycling injuries were treated in emergency departments nationwide including over 42,000 that resulted in hospitalization.
 - 71 percent of injuries were among men.
- More than 466,000 football injuries were treated in emergency departments nationwide, including about 10,000 that resulted in hospitalization.
 - 88 percent of injuries were among men.
- More than 265,000 baseball and softball injuries were treated in emergency departments nationwide, including over 4,500 that resulted in hospitalization.
 - 73 percent of injuries were among men.
- More than 231,000 soccer injuries were treated in emergency departments nationwide, including over 5,000 that resulted in hospitalization.
 - 83 percent of injuries were among men.



Source: ASPE computations from U.S. Consumer Product Safety Commission's National Electronic Injury Surveillance System for 2012

Estimated rate of sports-related injuries among individuals above the age of 25 is:

- Bicycling – 126.5 per 100,000 individuals
- Basketball – 61.2 per 100,000 individuals
- Baseball and softball – 41.3 per 100,000 individuals
- Football – 25.2 per 100,000 individuals
- Soccer – 23.8 per 100,000 individuals

The estimated rates are higher among children and young adults under the age of 25:

- Sports-related injuries make up about 20 percent of all injury-related emergency department visits among children age 6 to 19.²
- An estimated 12 million individuals between the ages of 5 and 22 years suffer a sport-related injury annually, which leads to 20 million lost days of school³ and approximately \$33 billion in health care costs.⁴
- In youth basketball, almost 12 percent of girls seen in the emergency department were diagnosed with concussions compared to 7 percent of boys.
- In youth soccer, 17 percent of girls seen in the emergency department were diagnosed with a concussion compared to 12 percent of boys.²

Common Type of Injury by Sport among Adults

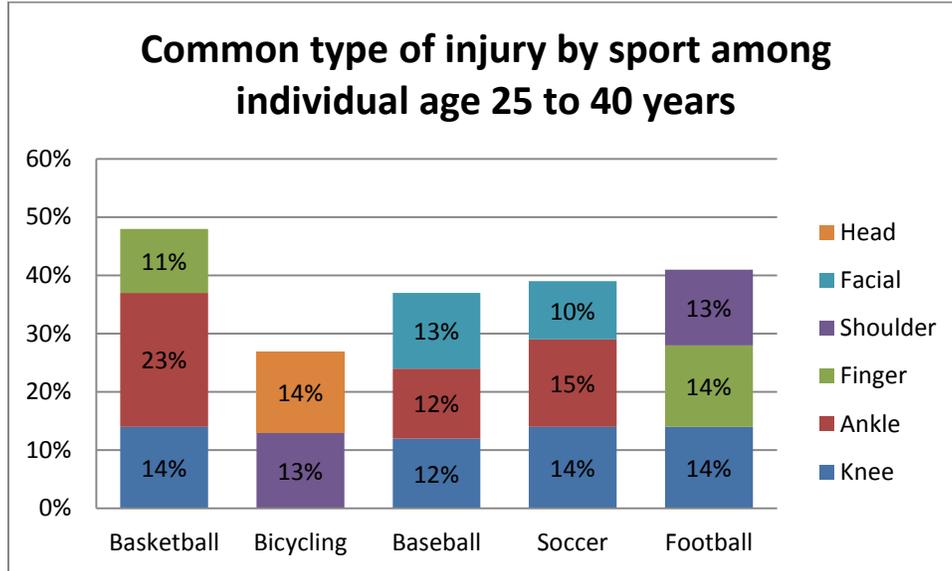
According to NEISS, in 2012, among adults between the ages of 25 and 40 years, the most common injuries in basketball and soccer were fractured or sprained ankles and knees, followed by facial injuries and broken or dislocated fingers. The most common injuries among bicycle accidents included head injuries (concussions and fractures) and shoulder fractures or dislocations. In football, prevalent injuries included broken or dislocated fingers, shoulders or knees as well as less common but more serious head injuries. In baseball and softball, fractured or sprained ankles and knees were the most frequent injuries, followed by facial injuries.

² “Game Changers: Stats, Stories and What Communities Are Doing to Protect Young Athletes.” Safe Kids Worldwide; August 2013. Available at:

https://www.safekids.org/sites/default/files/documents/ResearchReports/game_changers_-_stats_stories_and_what_communities_are_doing_to_protect_young_athletes.pdf

³ Janda D, *The Awakening of a Surgeon: A Family Guide to Preventing Sports Injuries and Death*, The Institute for Preventative Sports Medicine, 2004, p. 208.

⁴ “Summer sports top injury list,” *Orthopedics Today*, 2002; 22(6):13



Source: ASPE computations from U.S. Consumer Product Safety Commission's National Electronic Injury Surveillance System for 2012

Direct Medical Charges for Injuries⁵

For 25- to 40-year-olds, the estimated average charges for a leg fracture were about \$3,403, while the estimated average charges for an arm fracture were about \$7,666 (2011 dollars), according to 2009-2011 pooled data from the Medical Expenditure Panel Survey. For leg fractures, 5 percent resulted in medical bills about 4 times greater than the per person average, while for arm fractures, 5 percent resulted in medical bills 7 times greater than the average. For those without health insurance, these could be substantial unexpected bills.

Among adolescents between the ages of 10 and 19 years, the estimated average charge for a leg fracture was about \$4,700, while the estimated average charge for an arm fracture was about \$2,900 (2011 dollars). For leg fractures, 5 percent resulted in medical bills 8 times greater than the average, while for arm fractures, 5 percent resulted in medical bills 4 times greater than the average.

Estimated charges for dislocations among 10- to 19-year-olds averaged \$6,900 and almost \$4,600 for 25 to 40 year olds.

⁵ The charge estimates are derived using 2009-2011 pooled data from the Medical Expenditure Panel Survey Full Year Consolidated, Events, and Medical Conditions files. The amounts listed are full established charges for an event before any adjustments or discounts, which a provider could potentially charge an uninsured patient. The amounts were adjusted to 2011 dollars using Consumer Price Index.

Conclusion

While health benefits are derived from sports and recreational activities, there are also risks, including sports-related injuries. These injuries range from minor sprains and strains to more serious injuries such as broken bones and concussions. The direct medical bills resulting from sports injuries are substantial. The costs could be a heavy burden for individuals without health insurance coverage, who would not only lack protection against out-of-pocket costs but could also be forced to pay providers' full stated charges, rather than the discounted prices generally offered to those with insurance.

The incidence and expenses associated with common sports injuries demonstrate that even healthy and active adults can experience unanticipated and unaffordable health care costs. Fortunately, health care coverage is available at <https://www.healthcare.gov/> and many uninsured Americans qualify for financial help paying for health insurance under the Affordable Care Act.⁶

Table 1: Average Charges for Selected Injuries, by Age Category

Type of Injury	10-19 year olds	25-40 year olds
Fracture of Leg	\$4,689	\$3,403
Fracture of Arm	\$2,871	\$7,666
Sprains and Strains	\$2,294	\$3,175
Dislocation	\$6,942	\$4,575

Data Source: 2009-2011 Pooled Medical Expenditure Panel Survey Full Year Consolidated, Events, and Medical Conditions files.

Note: These are examples of medical charges that people without health insurance may face for such services.

⁶ Laura Skopec and Emily Gee, *Fifty-Six Percent of the Uninsured Could Pay \$100 or Less Per Month for Coverage in 2014*, ASPE Issue Brief, September 2013 (http://aspe.hhs.gov/health/reports/2013/Uninsured/ib_uninsured.cfm); Laura Skopec and Emily R. Gee, *Nearly 5 in 10 Uninsured Single Young Adults Eligible for the Health Insurance Marketplace Could Pay \$50 or Less Per month for Coverage in 2014*, ASPE Research Brief, October 2013 (http://aspe.hhs.gov/health/reports/2013/UninsuredYoungAdults/rb_uninsureduyoungadults.cfm); Emily R. Gee, *Eligible Uninsured African Americans: 6 in 10 Could Receive Health Insurance Marketplace Tax Credits, Medicaid or CHIP*, ASPE Issue Brief, December 2013 (http://aspe.hhs.gov/health/reports/2013/UninsuredAfricanAmericans/ib_UninsuredAfricanAmericans.cfm); Emily R. Gee, *Eligible Uninsured Latinos: 8 in 10 Could Receive Health Insurance Marketplace Tax Credits, Medicaid Or CHIP*, ASPE Research Brief, February 11, 2014 (http://aspe.hhs.gov/health/reports/2013/UninsuredLatinos/rb_uninsuredLatinos.pdf).