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Original Research

Shoulder Injuries Among United States High School Athletes During the 2005–2006 and 2006–2007 School Years

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Abstract

Context: The shoulder is one of the most commonly injured body sites among athletes. Little previous research describes shoulder injury patterns in high school athletes.

Objective: To describe and compare shoulder injury rates and patterns among high school athletes in 9 sports (football, soccer, basketball, baseball, and wrestling for boys and soccer, volleyball, basketball, and softball for girls).

Design: Prospective injury surveillance study.

Setting: Injury data were collected from 100 nationally representative US high schools via High School Reporting Information Online.

Patients or Other Participants: Athletes from participating high schools injured while involved in a school-sanctioned practice or competition in 1 of the above sports during the 2005–2006 and 2006–2007 school years.

Main Outcome Measure(s): Shoulder injury rates, diagnoses, severity, and mechanisms.

Results: During the 2005–2006 and 2006–2007 school years, athletes in this study sustained 805 shoulder injuries during 3550141 athlete-exposures (AEs), for an injury rate of 2.27 shoulder injuries per 10000 AEs. This corresponds to an estimated 232258 shoulder injuries occurring nationwide during this time. Shoulder injuries were more likely to occur during competition than practice (rate ratio = 3.01, 95% confidence interval = 2.62, 3.46). Shoulder injury rates per 10000 AEs were highest in football (5.09), wrestling (4.34), and baseball (1.90). Common shoulder injury diagnoses included sprains/strains (39.6%), dislocations/separations (23.7%), contusions (11.5%), and fractures (6.6%). Although 44.8% of athletes sustaining a shoulder injury returned to play in less

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than 1 week, 22.9% were out of play for more than 3 weeks, and 6.2% of shoulder injuries required surgery. Common mechanisms of shoulder injury included player-to-player contact (57.6%) and contact with the playing surface (22.8%).

Conclusions: High school shoulder injury rates and patterns varied by sport. Continued surveillance is warranted to understand trends and patterns over time and to develop and evaluate evidence-based preventive interventions.

Keywords: [epidemiology](#), [injury surveillance](#)

John E. Bonza, MPH, contributed to analysis and interpretation of the data and drafting and final approval of the article. Sarah K. Fields, JD, PhD, contributed to analysis and interpretation of the data and critical revision and final approval of the article. Ellen E. Yard, MPH, contributed to acquisition of the data and critical revision and final approval of the article. R. Dawn Comstock, PhD, contributed to conception and design, acquisition of the data, and critical revision and final approval of the article.

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