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Article Citation:
Brenda J. Shields, Gary A. Smith (*2009*) Epidemiology of Cheerleading Fall-Related Injuries in the United States. Journal of Athletic Training: November 2009, Vol. 44, No. 6, pp. 578-585.

doi: 10.4085/1062-6050-44.6.578

Original Research

Epidemiology of Cheerleading Fall-Related Injuries in the United States

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Abstract

Context: Over the past several decades, cheerleaders have been performing fewer basic maneuvers and more gymnastic tumbling runs and stunts. As the difficulty of these maneuvers has increased, cheerleading injuries have also increased.

Objective: To describe the epidemiology of cheerleading fall-related injuries by type of cheerleading team and event.

Design: Prospective injury surveillance study.

Setting: Participant exposure and injury data were collected from US cheerleading teams via the Cheerleading RIO (Reporting Information Online) surveillance tool.

Patients or Other Participants: Athletes from 412 enrolled cheerleading teams who participated in official, organized cheerleading practices, pep rallies, athletic events, or cheerleading competitions.

Main Outcome Measure(s): The numbers and rates of cheerleading fall-related injuries during a 1-year period (2006–2007) are reported.

Results: A total of 79 fall-related injuries were reported during the 1-year period. Most occurred during practice (85%, 67/79) and were sustained by high school cheerleaders (51%, 40/79). A stunt or pyramid was being attempted in 89% (70/79) of cases. Fall heights ranged from 1 to 11 ft (0.30–3.35 m) (mean = 4.7 ± 2.0 ft [1.43 ± 0.61 m]). Strains and sprains were the most common injuries (54%, 43/79), and 6% (5/79) of the injuries were concussions or closed head injuries. Of the 15 most serious injuries (concussions or closed head injuries, dislocations, fractures, and anterior cruciate ligament tears), 87% (13/15) were sustained while the cheerleader was performing on artificial turf, grass, a traditional foam floor, or a wood floor. The fall height ranged from 4 to 11 ft (1.22–1.52 m) for 87% of these cases (13/15).

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Current Issue
Available Issues

Journal Information

Print ISSN	1062-6050
eISSN	1938-162X
Frequency	Bimonthly:

January/February
March/April
May/June
July/August
September/October
November/December

Conclusions: Cheerleading-related falls may result in severe injuries and even death, although we report no deaths in the present study. The risk for serious injury increases as fall height increases or as the impact-absorbing capacity of the surfacing material decreases (or both).

Keywords: injury surveillance, athletic injuries, elite athletes, collegiate athletes, high school athletes, youth athletes

Brenda J. Shields, MS, contributed to conception and design; acquisition and analysis and interpretation of the data; and drafting, critical revision, and final approval of the article. Gary A. Smith, MD, DrPH, contributed to conception and design and critical revision and final approval of the article.

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