

New national study examines US high school sports-related fractures

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The popularity of high school sports in the United States has continued to increase over the past decade, with more than 7.5 million athletes participating in school sports during the 2008-09 academic year. A new study conducted by the Center for Injury Research and Policy of The Research Institute at Nationwide Children's Hospital found that 95 percent of fractures required costly diagnostic imaging, including X-rays, MRIs and CT scans, and 16 percent required surgical repair.

In addition to the high costs associated with fractures, the study found that due to their serious nature, fractures resulted in significantly more time lost from competition than other injury. Most resulted in three weeks or more time lost (34 percent) or medical disqualification from participation (24 percent).

"Fractures are a major concern for U.S. high school athletes. They can severely affect the athletes' ability to continue sports participation and can impose substantial medical costs on the injured athletes' families," explained study author Dawn Comstock, PhD, principal investigator in Center for Injury Research and Policy at Nationwide Children's Hospital. "Establishing measures to reduce fractures among U.S. high school athletes should be an important part of sports injury prevention policies."

Results of the study, published in the July issue of *Clinical [Journal of Sports Medicine](#)*, showed that fractures were the fourth most common injury after ligament sprains, muscle sprains and bruising. Overall, the

most frequently fractured body sites were the hand and finger (28 percent), wrist (10 percent) and lower leg (9 percent). The study also showed that boys sustained the majority (83 percent) of all fractures, and that while mechanisms of fractures differed between sports, half of all fractures occurred as a result of contact between athletes.

Additionally, nearly 10 percent of fractures were related to illegal activities.

"Illegal activities represent a preventable cause that should be targeted by prevention programs. Increasing penalties, strict enforcement of current penalties, and better education about rules and the dangers associated with breaking the rules could all help in reducing injuries related to illegal activities," said Dr. Comstock, also a faculty member of The Ohio State University College of Medicine.

This is the first national study to describe epidemiology of [fractures](#) among U.S. high school athletes. Sports studied included football, boys' and girls' soccer, girls' volleyball, boys' and girls' basketball, wrestling, baseball and softball. Data for this study were collected from the 2005-09 National High School Sports-Related Injury Surveillance System, High School RIO™ (Reporting Information Online), which was funded in part by the Centers for Disease Control and Prevention.

Provided by Nationwide Children's Hospital

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