Concussions in female high school athletes—frequent but under-reported

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Nearly half of female athletes participating in high school sports have had a diagnosed or suspected concussion—but most don't report these sports-related injuries to coaches or trainers, reports a study in the *Journal of Trauma Nursing*, official publication of the Society of Trauma Nurses, published by Wolters Kluwer.

"Our results suggest that, most of the time, the athlete who is experiencing symptoms of a concussion doesn't even recognize it as a concussion," comments lead author was Tracy McDonald, MSN, RN, CCRN, of The University of Kansas Hospital, Kansas City. "Even when they do recognize it as a concussion, they are unlikely to report it to seek help."

**Results Highlight Need for More Effective Concussion Education Programs**

The researchers surveyed 77 high school female athletes about their experience with sports-related head injuries and concussion symptoms. Thirty-one of the athletes said that they believed they had sustained a concussion—a rate of about 40 percent.

Of the 31 athletes reporting a suspected concussion, ten didn't tell a coach or trainer about their symptoms. Athletes who didn't report symptoms said they thought the injury "wasn't a big deal," wanted to keep playing, or thought the symptoms wouldn't last long.
Overall, three-fourths of the athletes—58 out of 77—said they had experienced some type of symptom consistent with concussion after traumatic contact. "Even though the majority of these students did not associate those symptoms with having a concussion, they likely did," says Tracy McDonald.

Basketball players were most likely to report diagnosed or suspected concussions, 53 percent; followed by soccer players, 43 percent. Headache was the most frequent symptom, followed by dizziness, sensitivity to light or noise, and blurred vision. Symptoms lasted less than a day in two-thirds of athletes. However, ten percent had symptoms lasting a week or longer.

The findings suggest "a limited understanding of the risks associated with concussion injuries," according to the authors. Only two-thirds of the athletes said they had received concussion education as part of their school curriculum or athletic program.

The study adds to the limited data on concussions, and under-reporting of possible concussion symptoms, among female athletes. Available evidence suggests that females may be at higher risk of concussions compared to male athletes, and are more likely to have a prolonged recovery period.

"Under-reporting of concussions and concussion-like symptoms in athletes continues to be a serious medical concern and research focus," the researchers write. Prompt symptom reporting is essential to identify possible concussions and remove the injured athlete from play or practice. While still too high, the rate of unreported concussions in this study of female athletes is lower than in previous studies of male athletes.

The authors acknowledge some key limitations of their study—including
its small sample size and the lack of a clear definition of concussion and concussion symptoms.

The findings highlight the need for more effective concussion education programs for adolescent athletes, Tracy McDonald and coauthors believe. They conclude, "Creating uniform, evidence-based educational symptoms across youth sports programs, regardless of sex, may lead to improved concussion reporting and ultimately fewer secondary complications."


Provided by Wolters Kluwer Health


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