

NATIONAL FEDERATION OF STATE  
HIGH SCHOOL ASSOCIATIONS



## NEWS RELEASE

### Study Indicates Higher Injury Rates for High School Athletes Who Specialize in One Sport

FOR IMMEDIATE RELEASE

Contact: Bruce Howard

INDIANAPOLIS, IN (November 3, 2016) — A study conducted by the University of Wisconsin School of Medicine and Public Health and funded by the National Federation of State High School Associations (NFHS) Foundation revealed that high school athletes who specialize in a single sport sustain lower-extremity injuries at significantly higher rates than athletes who do not specialize in one sport.

The study was conducted throughout the 2015-16 school year at 29 high schools in Wisconsin involving more than 1,500 student-athletes equally divided between male and female participants. The schools involved in the study represented a mixture of rural (14), suburban (12) and urban (3) areas, and enrollments were equally diverse with 10 small schools (less than 500 students), 10 medium schools (501-1,000 students) and nine large schools (more than 1,000 students).

Athletes who specialized in one sport were twice as likely to report previously sustaining a lower-extremity injury while participating in sports (46%) than athletes who did not specialize (24%). In addition, specialized athletes sustained 60 percent more new lower-extremity injuries during the study than athletes who did not specialize. Lower-extremity injuries were defined as any acute, gradual, recurrent or repetitive-use injury to the lower musculoskeletal system.

“While we have long believed that sport specialization by high school athletes leads to an increased risk of overuse injury, this study confirms those beliefs about the potential risks of sport specialization,” said Bob Gardner, NFHS executive director. “Coaches, parents and student-athletes need to be aware of the injury risks involved with an overemphasis in a single sport.”

Among those who reported previously sustaining a lower-extremity injury, the areas of the body injured most often were the ankle (43%) and knee (23%). The most common type of previous injuries were ligament sprains (51%) and muscle/tendon strains (20%).

New injuries during the year-long study occurred most often to the ankle (34%), knee (25%) and upper leg (13%), with the most common injuries being ligament sprains (41%), muscle/tendon strains (25%) and tendonitis (20%).

In addition, specialized athletes were twice as likely to sustain a gradual onset/repetitive-use injury than athletes who did not specialize, and those who specialized were more likely to sustain an injury even when controlling for gender, grade, previous injury status and sport.

Thirty-four (34) percent of the student-athletes involved in the Wisconsin study specialized in one sport, with females (41%) more likely to specialize than males (28%). Soccer had the highest level of specialization for both males (45%) and females (49%). After soccer, the rate of specialization for females was highest for softball (45%), volleyball (43%) and basketball (37%). The top specialization sports for males after soccer were basketball (37%), tennis (33%) and wrestling (29%).

The study, which was directed by Timothy McGuine, Ph.D., ATC, of the University of Wisconsin, also documented the effects of concurrent sport participation (participating in an interscholastic sport while simultaneously participating in an out-of-school club sport), which indicated further risk of athletes sustaining lower-extremity injuries.

Almost 50 percent of the student-athletes involved in the survey indicated they participated on a club team outside the school setting, and 15 percent of those individuals did so while simultaneously competing in a different sport within the school. Seventeen (17) percent of the student-athletes indicated that they took part in 60 or more primary sport competitions (school and club) in a single year. Among those student-athletes in this group who sustained new lower-extremity injuries during the year, 27 percent were athletes who specialized in one sport.

The student-athletes involved in the study were deemed “specialized” if they answered “yes” to at least four of the following six questions: 1) Do you train more than 75 percent of the time in your primary sport?; 2) Do you train to improve skill and miss time with friends as a result?; 3) Have you quit another sport to focus on one sport?; 4) Do you consider your primary sport more important than your other sports?; 5) Do you regularly travel out of state for your primary sport?; 6) Do you train more than eight months a year in your primary sport?

Although some sports (field hockey, lacrosse) are not offered in Wisconsin and were not included in the study, the study concluded that since specialization increased the risk of lower-extremity injuries in sports involved in the survey it would also likely increase the risk of injuries in sports that were not a part of the study.

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#### About the National Federation of State High School Associations (NFHS)

The NFHS, based in Indianapolis, Indiana, is the national leadership organization for high school sports and performing arts activities. Since 1920, the NFHS has led the development of education-based interscholastic sports and performing arts activities that help students succeed in their lives. The NFHS sets direction for the future by building awareness and support, improving the participation experience, establishing consistent standards and rules for competition, and helping those who oversee high school sports and activities. The NFHS writes playing rules for 17 sports for boys and girls at the high school level. Through its 50 member state associations and the District of Columbia, the NFHS reaches more than 19,000 high schools and 11 million participants in high school activity programs, including more than 7.8 million in high school sports. As the recognized national authority on interscholastic activity programs, the NFHS conducts national meetings; sanctions interstate events; offers online publications and services for high school coaches and officials; sponsors professional organizations for high school coaches, officials, speech and debate coaches, and music adjudicators; serves as the national source for interscholastic coach training; and serves as a national information resource of interscholastic athletics and activities. For more information, visit the NFHS website at [www.nfhs.org](http://www.nfhs.org).

#### MEDIA CONTACTS:

Bruce Howard, 317-972-6900  
Director of Publications and Communications  
National Federation of State High School Associations  
[bhoward@nfhs.org](mailto:bhoward@nfhs.org)

Chris Boone, 317-972-6900  
Assistant Director of Publications and Communications  
National Federation of State High School Associations  
[cboone@nfhs.org](mailto:cboone@nfhs.org)