

## NEWS RELEASE

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### **FIRST OF ITS KIND STUDY COMPARES HIGH SCHOOL KNEE INJURIES BY SPORT AND GENDER**

#### ***KNEE INJURIES AMONG MOST COSTLY H. S. SPORTS-RELATED INJURIES***

(COLUMBUS, Ohio) – Knee injuries, among the most economically costly sports injuries, are the leading cause of high school sports-related surgeries according to a study conducted at the Center for Injury Research and Policy (CIRP) of the Research Institute at Nationwide Children's Hospital and published in the June issue of *The American Journal of Sports Medicine*.

The researchers utilized data from the High School RIO™ online injury surveillance system which collects injury reports for nine high school sports from certified athletic trainers at 100 U.S. high schools selected to achieve a nationally representative sample. Data are collected for boys' football, soccer, basketball, baseball and wrestling and girls' soccer, volleyball, basketball and softball.

The knee was the second most frequently injured body site overall, with boys' football and wrestling and girls' soccer and basketball recording the highest rates of knee injury. The most common knee injuries were incomplete ligament tears, contusions, complete ligament tears, torn cartilage, fractures/dislocations and muscle tears.

“Knee injuries in high school athletes are a significant area for concern,” said Dawn Comstock, PhD, CIRP principal investigator, faculty member at The Ohio State University College of Medicine and one of the study authors. “Knee injuries accounted for nearly 45 percent of all sports injury-related surgeries in our study. Knee surgeries are often costly procedures that can require extensive and expensive post-surgery rehabilitation and can increase risk for early onset osteoarthritis. Without effective interventions, the burden of knee surgeries and rehabilitation will continue to escalate as the number of high school athletes continues to grow.”

Researchers also found several interesting gender patterns. For example, while boys had a higher overall rate of knee injury, girls' knee injuries were more severe. Girls were more likely to miss > 3 weeks of sports activity (as opposed to <1 week for boys) and were twice as likely to require surgery. Girls were also found to be twice as likely to incur major knee injuries as a result of non-contact mechanisms, often involving landing, jumping or pivoting.

“Parents of young female athletes should not overreact to these findings however,” warned Comstock. “The long term negative health effects of a sedentary lifestyle far outweigh those of the vast majority of sports injuries.”

The study also identified illegal sports activity as a risk factor for major knee injury in high school sports. Although illegal play was identified as a contributing factor in only 5.7 percent of all knee injuries, 20 percent of knee injuries resulting from illegal play required surgery. This finding suggests the importance of making it clear to athletes, parents, coaches, and officials that illegal play has the potential to cause serious injury.

Study authors stressed that monitoring trends through continued surveillance of high school sports injuries is essential to fully understand the mechanisms behind major knee injury. “The study of knee injury patterns in high school athletics is crucial for the development of evidence-based targeted injury prevention measures,” Comstock added. “We know that sports injury rates can be decreased through such efforts.”

**The Center for Injury Research and Policy (CIRP) of The Research Institute at Nationwide Children’s Hospital** works at the local to international levels to reduce death and disability due to injuries through research, education, advocacy and advances in clinical care. CIRP aims to improve the scientific understanding of the epidemiology, prevention, acute treatment, rehabilitation and biomechanics of injuries. CIRP educates health and other professionals, policy makers and the public regarding the importance of injuries, injury research and injury prevention. CIRP provides leadership in the development, implementation and scientific evaluation of public policy regarding control of injuries. Learn more about CIRP and High School RIO™ at [www.injurycenter.org](http://www.injurycenter.org).