**EPIDEMIOLOGY OF INJURIES REQUIRING SURGERY AMONG US HIGH SCHOOL ATHLETES**

J A Rechel, C L Collins*, D Comstock. Correspondence: The Research Institute at Nationwide Children’s Hospital, Center for Injury Research and Policy, 700 Children’s Drive Columbus, OH 43205, USA

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**Background** The proportion of high school sports-related injuries requiring surgery has significantly increased during the last decade. These injuries pose significant monetary and time loss burdens to young athletes.

**Objective** To investigate the epidemiology of US high school athletic injuries requiring surgery and to compare the rates and patterns of these injuries by sport, type of exposure and gender.

**Methods** Sports-related exposure and injury data were collected during the 2005–2009 academic years from a nationally representative sample of 100 US high schools via RIO. Results: In the nine sports studied, 1106 injuries requiring surgery occurred during 7 740 400 athlete exposures (AE) for a rate of 1.43 injuries per 10 000 AE. Injuries requiring surgery accounted for 6.2% of all high school sports-related injuries. The rate of injuries requiring surgery was higher in competition (3.15) than practice (0.79) (RR 3.99; 95% CI 3.54 to 4.50; p<.001). The most common body sites of injuries requiring surgery were the knee (46.0%), head/face/mouth (10.5%), and shoulder (9.2%). Girls sustained a greater proportion of knee injuries (68.7%) than boys (36.6%) (IPR 1.88; 95% CI 1.86 to 1.89; p<.001). The most common diagnoses for injuries requiring surgery were complete ligament strain (30.6%), fracture (26.8%) and torn cartilage (10.7%). 50.5% of injuries requiring surgery resulted in medical disqualification for the season.

**Conclusions** Rates of patterns of injuries requiring surgery differ by sport, type of exposure and gender. Future studies should identify sport-specific risk factors to help develop and assess effective interventions to decrease the incidence and severity of high school sports-related injuries.