

Sports specialization may lead to more lower extremity injuries

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Better education to coaches and parents about the effects of single sport specialization is critical, say researchers presenting their work today at the American Orthopaedic Society for Sports Medicine's Annual Meeting in Toronto, Canada.

"Our study is the first one to prospectively document the association between sports [specialization](#) and lower extremity injuries in a large, diverse, group of high [school](#) athletes," said lead researcher, Timothy A. McGuine, PhD, ATC from the University of Wisconsin.

McGuine and his colleagues enrolled 1,544 individuals into the study during the 2015-2016 school year with 50% being female and an average age of 16 years. Participants completed a questionnaire which identified their sports participation, history of [injury](#) and level of specialization (low, moderate, high) based on a 3-item scale previously published. They were asked to report all interscholastic and club sports participation during the previous 12 months and any activity that they planned to participate in during the upcoming school year. The questionnaires were also reviewed by an athletic trainer before being placed into the study.

The participants competed in 167,349 athletic exposures. A total of 490 (31.7%) reported sustaining a previous loss of practice/playing time due to a lower extremity injury (LEI) while 759 (49.2%) participated in their primary sport in a league outside of their high school. During the study time-period, 15% or 235 individuals sustained 276 lower extremity injuries causing them to miss an average of seven days of participation.

Injuries occurred most often in the ankle (34%), knee (25%) and upper leg (13%) and included ligament sprains (41%), muscle/tendon strains (25%) and tendonitis/tenosynovitis (20%). Soccer was the sport with the highest percentage of athletes being highly specialized with 265 subjects reporting that they had competed in more than 60 competitions within the last year in their primary sport. Players whose primary sports were basketball, football and soccer sustained more lower extremity injuries than their peers who were in baseball, tennis, track, volleyball or wrestling.

"Our results demonstrated that athletes who classified themselves as moderately specialized had a 50% higher incidence of LEI and athletes who had a high specialization classification had an 85% higher incidence of LEI," said McGuine. "Sport specialization appears to be an [independent risk factor](#) for injury, as opposed to simply being a function of increased sport exposure. Athletic associations, school administrators, coaches and [sports medicine](#) providers need to better educate parents and their athletes on the increased chances of injury risk and provide more opportunities for diversified athletic play."

Provided by American Orthopaedic Society for Sports Medicine

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