

Young athletes from higher income families more likely to suffer serious overuse injuries

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A Loyola University Medical Center study is reporting for the first time a link between overuse injury rates in young athletes and their socioeconomic status.

The rate of serious overuse injuries in [athletes](#) who come from families that can afford [private insurance](#) is 68 percent higher than the rate in lower-income athletes who are on public insurance (Medicaid), the study found.

The study also found that privately insured [young athletes](#) are twice as likely as publicly insured athletes to be highly specialized in one sport. Loyola researchers previously reported that young athletes who specialize in one sport are more likely to suffer serious overuse injuries, but until now this distinction has not been reported based on [socioeconomic status](#).

Neeru Jayanthi, MD, reported results in an oral presentation at the International Olympic Committee World Conference on Prevention of Injury & Illness in Sport in Monaco. These findings also were presented at the American Medical Society for Sports Medicine Annual Meeting in New Orleans, LA.

"Intense specialization in one sport can cost thousands of dollars a year in equipment, fees, transportation, private lessons, etc.," Jayanthi said. "Having the financial resources to afford such costs may provide increased opportunities for young athletes to participate in a single sport."

But there may be a different price to pay, added Lara Dugas, PhD, MPH, co-investigator on the study. "Young athletes with this type of training appear to be at greater risk for serious overuse injuries than those who have fewer financial resources," Dugas said.

Serious overuse injuries can force young athletes to the sidelines for one to six months or longer. Such injuries include stress fractures in the back or limbs, elbow ligament injuries and osteochondral injuries (injuries to cartilage and underlying bone).

Jayanthi and colleagues are conducting an ongoing collaborative study of athletes ages 7-18 who were seen at primary care and [sports](#) medicine clinics at Loyola University Health System and the Ann & Robert H. Lurie Children's Hospital of Chicago. Researchers so far have enrolled 1,190 athletes in the study, including 1,121 for whom insurance status could be determined. Both institutions care for a socioeconomically diverse population represented in the study. The median income of the families of the young athletes was approximately \$70,000; approximately 11 percent came from low-income neighborhoods, while 19 percent are on public aid.

Athletes completed surveys reporting training volumes, age of engagement in competitive sports, degree of specialization, etc. Researchers found that 30 percent of privately insured athletes were highly specialized in one sport, compared with 18 percent of athletes who were publically insured. Thirteen percent of the privately insured athletes suffered serious overuse injuries, compared with 8 percent of publicly insured athletes.

Researchers defined high degree of sports specialization as answering Yes to all of these questions:

- Can you pick a main sport?
- Did you quit all other sports to focus on one sport?
- Do you spend more than eight months per year training and competing in a single sport?

The study also found that both publicly and privately insured athletes spent about 10 hours per week in organized sports. But there was a significant difference in the amount of time they spent in free play: 7.1 hours per week for publicly insured athletes, versus 5.2 hours per week for privately insured athletes. Free play includes unstructured activity such as pick-up basketball games and touch football. From this finding, researchers postulate that not restricting unstructured free play may help be protective against serious [overuse injuries](#). But this hypothesis would have to be confirmed by further study.

Jayanthi offers this evidence-based advice to reduce the risk of injuries:

- Increase the amount of unstructured [free play](#), while limiting the amount of time spent in organized sports and specialized training. Do not spend more than twice as much time playing organized sports as you spend in unstructured play.
- Do not spend more hours per week than your age playing sports. For example, a 10-year-old should not spend more than 10 hours per week playing sports.
- Do not specialize in one sport before late adolescence.
- Do not play sports competitively year round. Take a break from competition for one to three months each year (not necessarily consecutively).
- Take at least one day off per week from sports training.

Provided by Loyola University Health System

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