

# Study finds high rate of lower back injuries in young athletes

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Lower back injuries are the third most common injuries suffered in athletes under age 18, according to a study presented by Loyola University Medical Center sports medicine physician Neeru Jayanthi, MD.

Many injuries are severe enough to sideline young athletes for one-to-six months, and put them at future risk for long-term back problems. Jayanthi presented findings Oct. 28 at the American Academy of Pediatrics National Conference and Exhibition in Orlando. The study included more than 1,200 young athletes who suffered 843 injuries. Lower back injuries accounted for 127 injuries (15.1 percent of the total). The only injuries more common were knee (31.1 percent) and ankle (16 percent). Other common injuries include [head injuries](#) and concussions (13.4 percent), shoulder (10.7 percent) and hip (6.4 percent).

Sixty-one percent of back injuries were less serious, such as injuries in the lumbar facet and sacroiliac joints. But 39 percent were serious, including [stress fractures](#) and complications of stress fractures such as spondyloysis and spondylolisthesis.

"If a young athlete has lower back pain for two weeks or longer, it is imperative that the athlete be evaluated by a [sports](#) medicine physician," Jayanthi said. "If a serious [injury](#) such as a stress fracture is not properly treated and does not heal properly, the athlete could be at risk for long-term back problems."

Jayanthi said young athletes are at risk of back injury from hyperextension (arching of the lower back) and other improper techniques. Insufficient strength of the abdominal and back extensor muscles also may contribute to injuries. The greatest risk appears to be the amount of intensive training done by a developing young athlete.

The study found that young athletes with lower

back injuries tended to spend more time playing sports than other kids who were injured. Those with back injuries spent an average of 12.7 hours per week playing sports, while the average for all kids who were injured was 11.3 hours per week, said study co-author Lara Dugas, PhD.

Between 2010 and 2013, Jayanthi, Dugas and colleagues at Loyola and Lurie Children's Hospital of Chicago enrolled athletes ages 8 to 18 who had come in for sports physicals or treatment for injuries. Researchers are following each athlete for up to three years.

The study confirmed preliminary findings, reported earlier, that specializing in a single sport increases the risk of overall injury, even when controlling for an athlete's age and hours per week of sports activity. "We should be cautious about intense specialization in one sport before and during adolescence," Jayanthi said.

Jayanthi offers the following tips to reduce the risk of injuries in [young athletes](#):

- If there's pain in a high-risk area such as the lower back, elbow or shoulder, the athlete should take one day off. If pain persists, take one week off.
- If symptoms last longer than two weeks, the athlete should be evaluated by a [sports medicine](#) physician.
- In racket sports, athletes should evaluate their form and strokes to limit extending their backs regularly by more than a small amount (20 degrees).
- Enroll in a structured injury-prevention program taught by qualified professionals.
- Do not spend more hours per week than your age playing sports. (Younger children are developmentally immature and may be less able to tolerate physical stress.)
- Do not spend more than twice as much time playing organized sports as you spend in

gym and unorganized play.

- 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 training in sports.

Provided by Loyola University Health System

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