

Emergency Visits for Children's Sports Injuries Waning

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CHICAGO, Illinois — Overall, the incidence of musculoskeletal trauma from the 8 most common sports and recreational activities in American children has decreased in the past decade. However, injuries resulting from football, soccer, and playground activities have increased, according to a new study.

Despite the overall decrease, "we see more pediatric sports injuries and operate on children more now than before. I was expecting a 2- or 3-fold increase in musculoskeletal injuries," said Shital Parikh, MD, from Cincinnati Children's Hospital Medical Center in Ohio.

In fact, children 5 to 14 years of age had 14,369 fewer sports-related musculoskeletal injuries that required emergency evaluation in 2010 than in 2000, Dr. Parikh reported, which is a 12.4% decrease.

Clearly, "what we see in the pediatric sports medicine office does not reflect what is happening in the community," he explained.

Dr. Parikh presented the findings here at the American Academy of Orthopaedic Surgeons (AAOS) 2013 Annual Meeting.

His data came from the US Consumer Product Safety Commission's National Electronic Injury Surveillance System. Dr. Parikh examined pediatric contusions, abrasions, sprains, strains, fractures, and dislocations involving the upper or lower extremities or the neck.

He analyzed the 8 top injury-producing activities: bicycling, basketball, football, roller sports, play on playground equipment, baseball and softball, soccer, and trampoline.

Using US Census population estimates, Dr. Parikh calculated injury incidence rates for each sport and performed multivariate linear regressions to determine whether injury rates changed significantly over the decade. The most common musculoskeletal injury for all 8 activities was fracture.

The activities with the greatest number of acute musculoskeletal injuries in children were the same in 2000 and in 2010 — bicycling, basketball, and football — although the ranking changed.

Table. Top 3 Causes of Musculoskeletal Injury by Year

Activity	2000 (n)	2005 (n)	2010 (n)	P for trend*
Bicycling	332,000	235,000	205,000	.045
Basketball	193,000	178,000	165,000	.003
Football	185,000	200,000	240,000	.036

*Controlling for US population rates per 1000 person-years.

Dr. Parikh explained that the increase in football and soccer injuries seen in emergency departments over the decade could be because participation in those sports is greater now, or because the level of competition is higher.

He reports that football concussions more than doubled over the study period — from 4138 in 2000 to 10,759 in 2010.

The only other increase in emergency department visits was seen in playground injuries, which are more common in children 5 to 9 years of age than in older children ($P = .006$).

Dr. Parikh suggested that, despite an overall decrease in acute musculoskeletal injuries, orthopaedic surgeons are operating more frequently on children because sports injuries are more severe today.

He acknowledged that a limitation of his study was that the database did not include overuse injuries or injuries seen in doctor's offices.

The decrease in acute sports injuries in children "is a good thing, no matter what the reason," said Jennifer Weiss, MD, who was asked by *Medscape Medical News* to comment on the study. Dr. Weiss, who was not involved in the study, is a pediatric orthopaedic surgeon at the Kaiser Permanente Southern California Medical Group in Los Angeles.

She said she is also seeing more children with sports-related trauma, especially injuries occurring on playground equipment. She suggested that the decrease in visits to the emergency department related to sports injuries might reflect a change in where patients are receiving initial care.

"People don't want to stop for an unnecessary emergency room visit, which can be costly," Dr. Weiss explained. "A lot of patients are going to their family physician, or even directly to their orthopaedic surgeon."

She added that efforts by the AAOS and other organizations to reduce the number and severity of sports injuries in children, such as the 1996 AAOS [position statement on trampoline safety](#), might have contributed to this decrease in injuries.

Still, in 2010, there were nearly 1.3 million acute sports injuries in 5- to 14-year-old children, according to data presented by Dr. Parikh.

"The message is that we still need to protect kids better," said Dr. Weiss.

Dr. Parikh and Dr. Weiss have disclosed no relevant financial relationships.

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