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Concussions Rise Among Student Athletes

By JENNIFER CORBETT DOOREN

Concussions among children playing sports rose sharply in recent years, a new study found, prompting a pediatricians' group to recommend schools and sports groups adopt stricter safety controls.

The study, published Monday in the journal *Pediatrics*, is the first to look at the prevalence of concussions among children as young as 8. It found concussion rates appeared to have more than doubled among students participating in five common sports like basketball, soccer and football from 1997 to 2007 even as participation in those sports declined.



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Associated Press

Players battle for the ball at the country's largest youth soccer tournament this summer in Blaine, Minn.

The American Academy of Pediatrics, in a separate paper, said young children take longer to recover from brain injuries than adults and older adolescents. It called for a "more conservative approach" for allowing young athletes to return to competition.

The academy said children need to rest "physically and cognitively" until symptoms subside, which is usually a week or two.

Indeed, many high schools have already adopted tougher standards for the 2010-2011 school year. Those moves came after the National Federation of

State High School Associations updated its rules and called for student athletes who suffer a head injury to be removed from the game or contest and not be allowed to return to play until cleared by a doctor. The federation writes the playing rules for 17 high school sports.

Some states have recently passed legislation calling on schools to adopt concussion-management regulations. However, many elementary and middle school-age children participate in sports programs run by their local communities or by private sports associations that fall outside the jurisdiction of school boards.

A concussion is caused when the brain is jarred from being hit. The condition temporarily interferes with the way the brain works, affecting things like memory, balance, judgment and sleep patterns.

The study, by researchers at Hasbro Children's Hospital and Brown University, both in Providence, R.I., looked at emergency-room visits for concussions in children ages 8 to 19 from 2001 to 2005. Of the approximately 502,000 ER visits for concussions, more than 252,000 were sports related, which included individual sports like bicycling and snow-skiing as well as team sports. Among children ages 8 to 13, 58% of all concussions were sports related, compared with 46% among 14-to-19-year-olds.

The study's lead author, Lisa Bakhos, who is now a pediatric emergency room doctor at Jersey Shore University Medical Center in Neptune, N.J., said that while many studies have been conducted on the impact of concussions among high-school, college and professional athletes, little is known about sports-related concussions in school-age children.

"We really don't know what the long-term consequences [of concussions] are in kids," Dr. Bakhos said. Researchers speculate that concussions in the still-growing brains of young children may produce more severe long-term developmental and cognitive problems than a similar injury in an adult.

The study also looked at concussions in children and compared them with participation rates in five organized team sports— baseball, basketball, football, ice hockey and soccer—from 1997 to 2007.

During that decade, participation in those sports declined by about 13%, but ER visits for concussions related to the same sports rose substantially. ER visits for children ages 8 to 13 doubled from about 3,800 to 7,800, and among children ages 14 to 19, visits tripled from about 7,000 to 22,000.

Dr. Bakhos said researchers don't know if the reasons behind the increase are that team sports have become more competitive, or if it's because of an increase in reporting rates, or both.

She also noted that the study looks at only ER visits for concussions, and therefore underestimates the actual concussion rate. The National Institutes of Health estimates there are more than one million concussions annually in both children and adults.

Dr. Bakhos said parents shouldn't shy away from letting their kids participate in sports, but should make sure they and coaches are following good prevention strategies such as wearing helmets. While most athletes wear proper helmets and other protective gear during football games for instance, Dr. Bakhos said she's seen practices conducted without helmets.

Signs of a concussion include headache, nausea and vomiting, but Dr. Bakhos said parents should seek medical attention after a head injury in cases where "your child just doesn't seem right."

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