

Injuries Lower When Athletic Trainer on Hand

By Todd Neale, Senior Staff Writer, MedPage Today

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Reviewed by [Dori F. Zaleznik, MD](#); Associate Clinical Professor of Medicine, Harvard Medical School, Boston

NEW ORLEANS -- Sports teams at high schools with an athletic trainer on staff or available had fewer injuries -- particularly recurrent ones -- and better identification of athletes with a concussion, researchers found.

Compared with high schools that did not have access to a trainer, those that did had significantly lower overall rates of injury in girls' soccer and girls' basketball, primarily driven by relative reductions in recurrent injuries of 83% and 66% for the two sports, respectively, according to Cynthia LaBella, MD, of Northwestern University Feinberg School of Medicine in Chicago.

The concussion rate was significantly higher at schools with access to an athletic trainer -- 8.05 times higher for soccer and 4.5 times higher for basketball -- probably because trainers are better at identifying signs and symptoms of concussion than coaches and athletes themselves, LaBella reported at the American Academy of Pediatrics meeting here.

"Our study findings advocate for greater athletic trainer coverage for high school athletes" she said, noting that only 42%

high school trainer and time trainer

Certified at a variety of emergency conditions, injuries, and

One would

issue has not been well studied, LaBella said.

She and her colleagues compared data from two injury surveillance systems -- the High School Reporting Information Online (RIO) system, which includes a national sample of high schools with athletic trainers, and the Sports Injury Surveillance System (SISS), which contains information from a sample of Chicago public high schools without athletic trainers and was developed for a previous study on knee injuries.

The researchers used two datasets to compare injury rates among girls' soccer and basketball players for three school years from 2006 to 2009. There were 100 schools -- selected to be nationally representative -- from RIO and 36 from SISS.

For RIO, athletic trainers submitted weekly online reports about athlete exposures -- one exposure was defined as one athlete participating in a practice or game -- and injuries, defined as those that restricted an athlete's participation for at least 1 day and required medical attention by an athletic director or physician.

For SISS, coaches submitted weekly reports about athlete exposures and injuries, defined as those that caused an athlete to miss at least part of a practice or game.

When comparing girls' soccer teams, those at schools with an athletic trainer had a significantly



Action Points

Note that this study was published as an abstract and presented at a conference. These data and conclusions should be considered to be preliminary until published in a peer-reviewed journal.

Explain that high school girls participating on soccer or basketball teams had lower rates of injuries, fewer injury recurrences, but higher reported rates of concussion if they attended a school with a certified athletic trainer compared with schools that did not have a trainer.

Note that the data came from two different databases with slightly different definitions of sports-related injury.



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lower rate per 10,000 athlete exposures of all injuries (23.07 versus 40.00; rate ratio 0.58), new injuries (20.64 versus 25.38; RR 0.81), and recurrent injuries (2.44 versus 14.63; RR 0.17).

The findings were similar for basketball, although the rate was not significantly different for new injuries. As in soccer, the largest reduction in the injury rate associated with access to an athletic trainer was for recurrent injuries (2.46 versus 7.34 per 10,000 athlete exposures; RR 0.34).

LaBella said access to athletic trainers may be associated with lower injury rates because of prompt recognition and triage of injuries, which could reduce severity and complications, because of facilitation of rehabilitation programs, or because of close monitoring of recovery to ensure the injuries are fully healed before the athletes return to play.

She acknowledged, however, that the study had some limitations. The injury definitions were slightly different in the two datasets, so the lower injury rate among schools with athletic trainers could have been explained partly by the more conservative definition of requiring medical attention.

In addition, SISS was designed for a study on knee injury prevention, and coaches may have under-reported other types of injuries.

And finally, the socioeconomic status of the students was likely higher among schools with an athletic trainer, LaBella said, resulting in better health and fitness, training facilities and equipment, and access to medical care. Those factors could lower the injury risk.

SISS was funded by Children's Memorial Research Center and Children's Memorial Office of Child Advocacy. RIO is funded by the CDC, the National Federation of State High School Associations, the National Operating Committee on Standards for Athletic Equipment, DonJoy Orthotics, and EyeBlack.

LaBella did not report any conflicts of interest.

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Source reference:

LaBella C, et al "A comparative analysis of injury rates and patterns among girls' soccer and basketball players at schools with and without athletic trainers from 2006/07-2008/09" *AAP* 2012.

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