

What You Don't Know Can Hurt You

Striving to keep students safe through concussion education and prevention

SHELBY ANDERSON

Last fall, Evan Coubal a sixth-grade student in Muskego suffered a concussion during a youth football game. A few days later, he hit his head playing during recess. He was rushed to the hospital where he later died of head trauma.

Stories such as Evan's make it clear that traumatic brain injuries in youth sports pose a real danger.

"It's not just football, or hockey, or soccer," says Dave Anderson,

executive director of the Wisconsin Interscholastic Athletics Association (WIAA). "A kid can bump their head any number of ways and we are finding that concussion of some

degree or another is more common than once first thought."

Dr. Kevin Walter, program director of Children's Hospital of Wisconsin Primary Care Sports Medicine, reports that there were more than 70,000 concussions nationwide in youth sports in 2008. He also found that concussions made up almost 20 percent of all high school football injuries and it was the most

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common injury in boys and girls hockey last school year.

Even with these alarming statistics, Walter says concussions are under reported and hard to trace. Athletic trainers and doctors find that athletes are reluctant to speak up if they are experiencing concussion symptoms. Athletes don't want to miss playing time or let down teammates.

“We do know that it (concussion) is rising in incidence — in part because of awareness, but also just because the numbers are increasing in general,” Walter says. “We also know it is absolutely under reported.”

Concussions Defined

According to the Mayo Clinic's website, “A concussion is a traumatic brain injury that alters the way your brain functions. Effects are

usually temporary, but can include problems with headache, concentration, memory, judgment, balance and coordination.”

In addition, the Mayo Clinic points out that while concussions are usually caused by a blow to the head, they can also “occur when the head or upper body is violently shaken.” Information gathered by the WIAA adds that a person doesn't need to lose consciousness to suffer a concussion, “In fact, less than 10 percent of athletes lose consciousness.”

Concussions also affect youth differently than adults. Information from the WIAA says research proves adolescents are more vulnerable to concussions and get them more often than adults. Adolescents who suffer a concussion also take longer to heal.

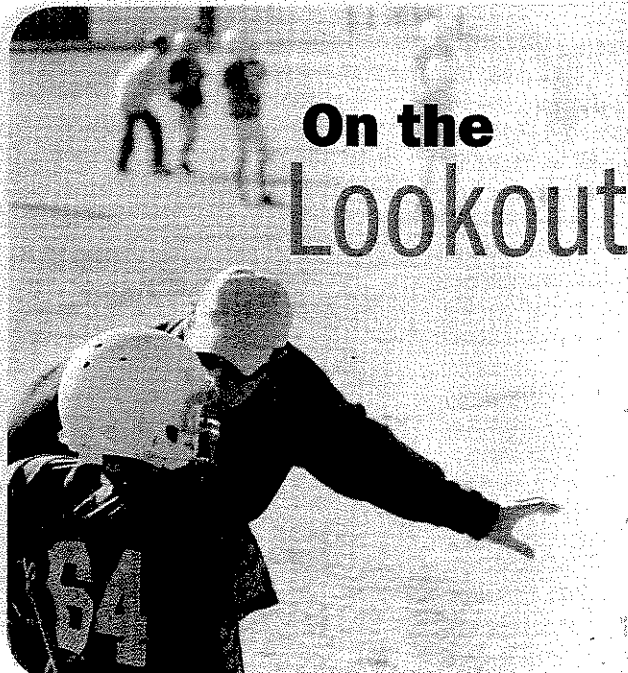
There is a lot about brain injuries such as concussions that is unknown.

Often when a brain image is taken of someone who has recently suffered a concussion, nothing abnormal shows up. According to the WIAA information, “A concussion causes a problem with brain function not brain structure.”

However, that does not negate the seriousness of the injuries.

An article in the *Milwaukee Journal Sentinel* told the story of Forrest Florsheim of Mequon who suffered a concussion playing hockey when he was 8. He had a second one a month later.

“He said he felt funny, and he began to vomit,” his mother, Jennifer Hamilton Florsheim told the *Milwaukee Journal Sentinel*. “Knowing what we know now, I believe that second concussion made him more susceptible to concussions.” ▶



On the Lookout

What can coaches, parents, teachers and school leaders do to monitor their athletes for signs of a concussion?

- 1) Be on the lookout for potential injuries. If you don't seek out athletes and ask them about concussions, they likely won't come to coaches with symptoms. If coaches don't ask, athletes won't tell.
- 2) Have honest and open discussions before the season begins about concussions — highlighting the fact that they are brain injuries and have the potential to cause lifelong consequences. Therefore, they have to be immediately reported.
- 3) When in doubt, sit them out. If there is any question that an athlete has a concussion, they should be held out of activity until they can be medically evaluated by a physician or licensed athletic trainer. □

Source: Dr. Kevin Walter, program director of Children's Hospital of Wisconsin Primary Care Sports Medicine.

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Forrest suffered a third concussion while jumping on a trampoline. After that, he was told he couldn't play contact sports.

"This was his passion," Florsheim said. "We had to take it away. He has to miss out on that."

Revamped Policy

Incidents like Forrest's are becoming more prevalent among youth athletes across Wisconsin. Professional sports

According to WIAA policy, student athletes who suffer a concussion cannot return to competition on the same day. While this may sound like a common sense procedure, Walter says that 16 percent of high school athletes who suffer a concussion were continuing to practice or compete on the same day.

As for a student athlete that displays symptoms of a concussion, the WIAA policy states that the athlete should be removed from practice or

Common signs of a concussion include: dazed or stunned appearance, change in the level of consciousness or awareness, clumsiness, answers more slowly than usual, shows behavior changes, loss of consciousness, and asks repetitive questions or memory concerns.

Anderson says it's up to the WIAA and local school districts to monitor and support students. When asked why school leaders, specifically, should care about concussions,

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— Dr. Kevin Walter, Children's Hospital of Wisconsin



such as the National Football League have also started to investigate traumatic brain injuries in its players.

However, concussion awareness has been a focus of WIAA for the past decade.

"The WIAA has been on the forefront of this across the country for the past decade," says Tim Sivertson, Elk Mound school board member, WASB region 5 director and WIAA school board representative. "The WIAA has been putting information out and they are staying current with the most up-to-date information to make sure we are keeping our kids safe."

In a continuing effort to keep student athletes safe, the WIAA recently stepped up its policy and rules regarding brain injuries.

competition and be tested for a concussion. If authorized medical personnel provides a medical note indicating the student athlete did not sustain a concussion, the player may return to competition or practice following the examination.

The WIAA policy has also set clear procedures for returning athletes to practice and competition after they have suffered a concussion.

However, identifying an athlete who has just suffered a concussion can be difficult. Making this even more challenging is the fact that most youth and high school athletic teams don't have an athletic trainer monitoring the athletes at all competitions and practices. That's why it's important for parents, coaches and the athletes themselves to speak up if someone is showing symptoms.

Anderson said, "Because many of them are parents, because they are instructional and educational leaders and because they are tasked and entrusted with the good care and safe keeping of their students."

But, Anderson adds, the reasons for board members and superintendents to be involved and informed on this topic don't stop there.

Academic Performance and Other Risks

Last spring, youth and high school athletes from around the country testified before congress. Their testimony on concussion in high school athletics was surprising. Sara Rainey from West Potomac High School in Alexandria, VA suffered a concussion while playing in a varsity soccer game. She said that she now has trouble doing simple math in her head.

Walter says that many youth will have symptoms that last three or more weeks, "The more athletes try to push through with sports, academic activities and screen time, the longer symptoms will last."

Persistent symptoms can include difficulty concentrating, which can affect performance in the classroom. Anderson says this is where schools need to make sure they support their students.

"We need to recognize that if we have a child with a concussion, that student's learning needs may have to be met differently for a period of time while they recover," he says. "We need to be prepared to not only look after their physical wellbeing in that period of recovery but also recognize that there might be mood swings, depression and a slower and impaired learning style."

The period of recovery is an important time — not only in terms of getting better but also because of the risk of a second concussion. Walter says, "Repeat injuries often will increase dysfunction and symptoms and prolong healing time, but they also can be devastating injuries."

There is also a risk for Second Impact Syndrome (SIS). This is catastrophic brain swelling, which Walter said, thankfully, is rare. SIS occurs only in adolescent athletes that sustain a second injury while still symptomatic from their first. The outcome is bad: 50 percent of patients die and survivors have permanent impairment.

As seen in professional athletes, long-term risks for traumatic brain injuries can be serious. Long-term symptoms can include: an increased risk for depression and mental health disorders; permanent cognitive impairment (poor academic function); increased risk of dementia; and Chronic Traumatic Encephalopathy (degenerative disease).

Prevention and Education

Unfortunately, Walter says, there is no way to prevent concussions. New equipment, including redesigned football helmets and mouth guards, haven't been scientifically proven to reduce the risk for concussions.

Rather, Walter says, coaches, parents and athletes need to make sure all athletes wear proper safety equipment and more importantly, that proper technique is used. Coaches should also try to minimize the amount of contact in practices and educate everyone involved about the symptoms and risks of concussions.

Education Essential

"Coaches and parents have the biggest effect on how athletes deal with concussions, so continuing to improve their knowledge and improving how they pass that knowledge along to athletes is important," Walter says. "The more athletes hear the message, and the more ways that message can be delivered, the more awareness communities will have."

Included in the lack of education is a lack of research and study surrounding youth concussions. Walter is director of the state's only concussion clinic for youth athletes, which strives to provide the most up-to-date care for young athletes with a concussion. The clinic's work includes accurately diagnosing youth athletes and providing education to athletes, families, and coaches. Walter says more focus and research

Concussion Management

The National Federation of High Schools Sports (NFHS) Medicine Advisory Committee strongly recommends the following protocol for concussion management:

- No athlete should return to play or practice on the same day of a concussion.
- Any athlete suspected of having a concussion should be evaluated by an appropriate health-care professional that day.
- Any athlete with a concussion should be medically cleared by an appropriate health-care professional prior to resuming participation in any practice or competition.
- After medical clearance, return to play should follow protocol with provisions for delayed return-to-play based upon the return of any signs or symptoms.

is needed around concussion diagnosis and management, especially in the pediatric and adolescent athlete.

Meanwhile, at the local level, in every school district in Wisconsin, Sivertson says school leaders need to get educated on concussion risks and support policies that protect student athletes.

"It's about the students that we take care of," Sivertson says. "We try to ensure their safety and maintain their overall well-being as they continue to progress academically. The last thing we want to see is someone risk their health or academics after having a concussion." ■

Anderson is editor of Wisconsin School News.

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