



## Kids and Concussions: One of the most dangerous sports of all - Cheerleading

By Star-Ledger Staff

January 04, 2010, 11:59PM

By Matthew Stanmyre and Jackie Friedman/The Star-Ledger

*In the second of a 3-part series on concussions and their impact on youth sports, Star-Ledger staff writers Matthew Stanmyre and Jackie Friedman take a look at the dangers of competitive cheerleading.*

*Part 1: the effects of head injuries in young athletes, what New Jersey is doing and what more can be done to protect our kids.*

*Part 3: A look at the steps schools and youth leagues in New Jersey are taking to cope with brain injuries and other safety issues.*



Cheerleading has the second highest rate of concussions among athletes. The West Milford High cheerleading squad has had several incidents with concussion over the last few years. (Jennifer Brown/The Star-Ledger)

Alexa McCormack doesn't remember much about the day that changed her life.

Not the stunt gone awry. The impact of the collision. The panic in the gymnasium.

But the reminders are there almost every day: headaches, prescription medication, blurred vision.

Two years ago, as a junior at West Milford High School in Passaic County, McCormack suffered a concussion that knocked her unconscious and split her eardrum. It was one of three concussions she sustained during

the last 18 months of her career as a cheerleader.

McCormack's injuries are hardly unusual in cheerleading, which, according to a study released last year by the National Center for Catastrophic Sports Injury Research, accounts for 65.1 percent of all catastrophic sports injuries female athletes have incurred over the past 25 years.

During that time, 67 of the 103 fatal, disabling or serious injuries recorded among female high school athletes occurred in cheerleading. Studies also show emergency room visits among cheerleaders of all ages have soared over the past decade, including injuries suffered by those who were 13 or younger.

These alarming numbers have compounded a brain injury epidemic that is crippling young athletes across the nation, doctors say. In high school sports alone, more than 400,000 concussions occurred nationwide last school year, and are occurring in both contact and noncontact sports, prompting a growing awareness across the sports landscape.

"These girls are not just standing on the sidelines waving pompoms anymore," said Vincent McInerney, director of orthopedic education and sports medicine at St. Joseph's Regional Medical Center in Paterson. "There are some instances where we've seen more injuries in cheerleading than in football. The trend is disturbing. This is serious."

A study released last year by the federal Centers for Disease Control and Prevention found that cheerleading has the second highest rate for concussions and traumatic brain injuries in high school sports, behind only football.

### **Knocked out**

McCormack was injured at a competition two years ago when a teammate fell awkwardly from nearly 10 feet in the air. The teammate crashed into the side of McCormack's head as she was about to catch her.

McCormack was knocked unconscious for roughly five minutes. She awakened in an ambulance, confused and disoriented, and vomited several times.

"I'm not allowed to do any contact sports ever again," says McCormack, now a freshman at East Stroudsburg University in Pennsylvania. "It's not fun."

Soon after her injury, McCormack began experiencing concussion symptoms: blurred vision, memory loss, migraines. She missed mid-terms because she struggled to retain information. She grew depressed watching her teammates from the sidelines.

Cheerleading has recently become a specific area of concern for the medical community because it has evolved over the past decade to include more aerial stunts and complex routines often performed without padding and on hard surfaces such as basketball courts or running tracks.

New Jersey has approximately 50 competitive cheerleading teams, and most high schools have an event cheer team.

The New Jersey State Interscholastic Athletic Association, the governing body of high school athletics in the state, does not recognize cheerleading as a varsity sport, which leaves certification requirements up to individual high schools. For instance, Bishop Ahr High in Edison requires three forms of certification for head coach Karen Barnes and her three assistants, whereas other schools simply require a substitute teacher certificate.

The National Cheer Safety Foundation found that fewer than 1 percent of cheer programs have an emergency plan in place.

"The injuries happen most often when you are trying to do something you're not capable of," says Barnes, a

32-year coach. "Not often do accidents happen during the learning process because you're taking it step-by-step. But when you're not taking things step-by-step, I think that's when the injuries happen."

Doctors say females are at a greater risk for traumatic head, neck and brain injuries because of their anatomy, which generally includes thinner, weaker necks than males. That factor, coupled with the rise in complexity of the sport, has prompted athletic trainers across the state to push for ImPACT testing in cheerleading.

ImPACT is widely considered the most effective neuro-psychological evaluation test available. The 25-minute, computerized testing program measures memory and reaction time and provides a baseline score for an athlete that can be used for comparison after a brain injury.

Schools such as Ridgewood High, DePaul Catholic in Wayne, West Milford and others have started to use ImPACT testing on their cheerleaders, but athletic trainers and doctors stress the need for universality.

"The schools that don't have it are at a tremendous disadvantage in a lot of different ways," says Ridgewood athletic trainer Nick Nicholaides. "It's a great educational tool and it's a great evaluation tool. If you do have it and you're not testing cheerleading, you're doing a disservice to the kids because there is such a high rate of concussion."

Nicholaides noticed the need to monitor cheerleaders more closely when the team at his school reported seven concussions two years ago — significantly more than the football team.

### Whiplash

Last month, Kenzie Smith, a junior cheerleader at West Milford High, suffered a concussion during practice. A falling teammate accidentally kicked Smith in the face, causing her to fall backward and hit her head on the ground, creating a whiplash-type injury.

Smith was taken to the hospital and has since seen a concussion doctor several times. Like any other athlete, Smith is doing everything she can to return to competition as quickly as possible.

"People definitely overlook cheerleading as something that's not as advanced physically," Smith says. "They don't realize what we have to go through to get it done."

McCormack missed eight months after suffering her second concussion, but returned to competition for her senior season. She suffered a concussion within a month of being cleared to participate when she was injured while stunting during a football game.

When McCormack rides in airplanes, she feels intense pressure in her head. She has migraine headaches every day. Her vision continues to deteriorate.

"Knowing I'm not allowed to do anything ever again stinks," she says. "When you break your leg, it heals and you can tumble again. But with the brain, there's nothing you can ever do about it."

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West Milford High cheerleader Kenzie Smith had a concussion earlier this year. (Jennifer Brown/The Star-Ledger)

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