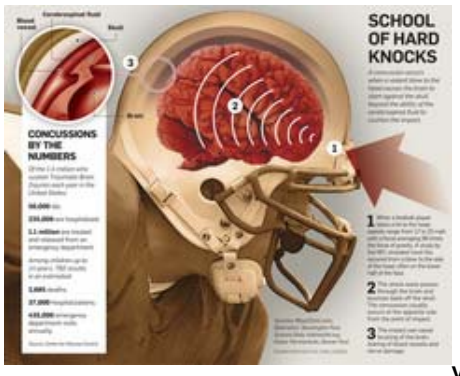
Everything Jersey

Kids and Concussions: The effects of head injuries in young athletes

By Matthew Stanmyre/The Star-Ledger
January 04, 2010, 6:00AM

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

Part 2 tomorrow: Every sport presents the danger of concussion — even cheerleading. Some cheerleaders from New Jersey still cope with the devastating effects of brain injuries suffered in practice and during competitions.



Vi
full size

Shawn Weston/The Star-Ledger

It is a recipe for disaster.

Athletes play for volunteer youth coaches who lack medical training. High school cheerleaders compete for coaches who have never taken a first-aid course. Kids in dozens of sports at all levels play through the pain after violent collisions rattle their skulls. Then there are the parents, often too willing to rush their kids back onto the playing field.

These alarming realities have compounded a brain injury epidemic that is crippling young athletes in New Jersey and across the nation, doctors say. In high school sports alone, more than 400,000 concussions occurred nationwide last school year. It's impossible to know how many thousands more occurred in youth sports from football to field hockey and soccer to softball.

The effects — memory loss, throbbing headaches, depression — are only part of more serious medical problems that could threaten every aspect of a young person's future.

"The morbidity of this injury is far greater than anyone ever realized," says Micky Collins, one of the nation's leading concussion doctors. "I never appreciated how many kids have problems with this until I started seeing 15 to 20 patients a day."

Concussion awareness vaulted into the mainstream this past year when a study revealed the effects head injuries had on former National Football League players. A rash of brain injuries to marquee NFL players this season also has prompted greater discussion about the injury.

That talk has been slow to trickle down to high school and youth athletes — even if the evidence shows that concussions are touching athletes at all levels in seemingly every sport.

Consider:

• Last year, Montclair High football player Ryne Dougherty died after sustaining his second brain injury in a month.

• Niki Popyer, a 16-year-old former basketball player from Marlboro, sustained 11 concussions over four years, becoming a national face of the dangers of concussion.

• Alexa McCormack, a former West Milford High cheerleader, still has migraine headaches and blurry vision after sustaining three concussions during competition in an 18-month span.

• Former La Salle University football player Preston Plevretes, a Marlboro native, needs 24-hour nursing care and can barely speak after sustaining two concussions in a month's time four years ago.

EVALUATING IMPACT

Washington state, which enacted the Zackery Lystedt Law in May, requires all athletes under 18 who are suspected of having a concussion to get written consent from a licensed medical provider trained in evaluating concussions before returning to play. It is believed to be the first law of its kind in the country.

In New Jersey, where there are an estimated 258,000 high school athletes, vigilance has increased even if the state has yet to mandate specific concussion care.

Approximately 85 percent of the high schools in New Jersey have athletic trainers on staff, compared with the national average of 42 percent. The state's high schools are also using ImPACT testing at a greater rate than nearly any other state, with 141 schools using the tool.

ImPACT, which high schools and doctors in the state started using over the past five years, 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.

U.S. Rep. Bill Pascrell Jr. (D-8th Dist.) is chairing the Congressional Traumatic Brain Injury Task Force and co-sponsored a bill that would provide federal grants for ImPACT testing nationwide. He presented the bill on Capitol Hill last month.

But more can be done, doctors say. They stress that vigilance regarding concussions needs to continue to spread among parents, players and coaches.

Vi

full size

"Or that's when you can start going down a road you really don't want to go down," Collins says.

PLAYING WITH PAIN

Many athletes treat head injuries as they would sprained ankles or bruised shins — they try to play through them.

Kyle Gibson, a linebacker for Ridgewood High, felt his head spinning after a collision with an opposing running back during a game early this past season. He never told anyone about the dizziness or the headache and never came off the field.

"I just made things worse," Gibson says.

In the fourth quarter of the same game, he collided helmet-to-helmet with an opponent, igniting a fire in his head later diagnosed as a concussion. Gibson missed the next seven weeks, suffering through bouts of dizziness, headaches and nausea. His lengthy rehabilitation could have been shorter had he reported the symptoms after the initial hit, doctors say.

"It was a huge dilemma," Gibson says. "I knew the linebacker next to me had a pretty serious quad injury and he played the whole game. I thought the whole time that if he could play, I could play. I felt an obligation to be on the field for my teammates."

Kyle Gibson played through an initial head

Kevin Saum felt the same way.

injury during a football game this season, and later in the same game endured another collision that ignited a terrible concussion. (Mitsu Yasukawa/ The Star-Ledger)

Kevin Saum of West Morris rushes for a touchdown against Columbia High in 2006. (Mitsu Yasukawa/ The Star-Ledger)

Saum, who two years ago was a senior linebacker at West Morris High, practiced for a week, despite splitting headaches. He knew something wasn't right, but he didn't tell anyone because he wanted to uphold his reputation as team captain.

It turned out he had sustained a concussion, then a second one during a game one week later, losing feeling in his legs and collapsing on the sideline. He was airlifted to the hospital, where doctors performed a craniotomy, drilling into his skull to relieve pressure on his brain. He spent 10 days in the hospital. He can never play contact sports again.

"In my gut I knew I should have told someone, but I didn't," says Saum, now a sophomore at Rutgers. "I didn't want to come off like a sissy."

Kendall Sarson, a soccer player at Villa Walsh Academy in Morristown, sustained three concussions in just four months before ending her career. After a year spent rehabbing, Sarson still faced dizziness and headaches during exercise.

"My parents would say, what if I got hit one more time and my GPA plummeted or I got hit another time and didn't have the ability to do art anymore," Sarson said. "The brain is so complicated you don't know what could be lost the next time you get hit. As much as I loved soccer there were things that I didn't want to trade."

All three noted the urge to play through pain in order to set an example for their teams. Saum said the mentality to tough it out through injuries was ingrained when he started playing football at age 7.

"If I reported the first one, I would have sat out for three weeks and I would have been fine," Saum says. "There's not a day that goes by that I don't think about that decision that I made. It changed the direction of my life in such a drastic way."

NO FORMAL PROTOCOL

The New Jersey State Interscholastic Athletic Association, the governing body of high school athletics in the state, has no formal protocol for handling concussions, leaving decisions about identifying injuries and caring for them to each school.

"We have been very aggressive in attempting to get more knowledge out," says Bob Baly, assistant director of the NJSIAA. "We just urge schools to get involved with the ImPACT study."

Parents must also be at the forefront, doctors say. Some symptoms can be easy to spot such as dizziness and nausea, while others such as fatigue and mood changes may be tougher to see.

Doctors have outlined as many as 20 signs of a brain injury, ranging from headaches and noise sensitivity to memory loss and depression. Those effects can hurt both an athlete's performance in the classroom and relationships with friends and family. Even mild collisions that don't draw attention during games and practices can lead to concussion, so doctors urge parents to closely monitor their children if a brain injury is suspected.

Further complicating the process, typical clinical head scans such as the MRI and the CT scan most often do not show signs of concussion — those scans typically are used to spot fractures and bleeding in the head.

"We sometimes see that the mild injuries become severe and the severe injuries become mild," says Collins, the assistant director of the University of Pittsburgh Medical Center sports concussion program and a co-creator of ImPACT. "The kids who have a few symptoms, they continue to play and that's when they get hit again. Those are the kids that end up taking the longest to recover.

"The kids that lose consciousness for a minute on the field, and everyone sees it and the kid is very conservatively managed — those severe ones actually get better sometimes faster than the mild ones that don't get recognized early on."

Collins urges — unequivocally — the athlete be removed from play immediately until he can be intricately evaluated by medical personnel. The recovery process then necessitates a "constellation" of efforts to ensure effective recovery for young athletes. Those efforts must be prevalent in the schools — both academically and athletically.

"It's just a matter of rest," says John Davis, the athletic trainer at Montclair State University. "You don't have to do any surgical intervention. You could do all the tests available, but really rest is the key."

THE RECOVERY

Doctors and athletic trainers say there is one final decision to make regarding concussions, and it's often the most difficult: When to return to play — if at all.

The NJSIAA and the state of New Jersey do not regulate when a student can return to play, leaving decisions to the parents, coaches, athletic trainers and other medical professionals. Athletes are most often cleared to return to play by their doctor or the athletic trainer at school.

Significant parts of the recovery process include:

• Notifying the athlete's school of the injury so teachers and administrators recognize the need for reduced cognitive stress.

• Encouraging the athlete to reduce cognitive stress at home by eliminating text-messaging, video game play and other brain stimulators.

• Eliminating physical exertion until the symptoms of concussion dissipate.

"We know the brain undergoes a recovery process, and there's a lot of variability in recovery," Collins says. "Some kids take a week and some kids take months and months to recover from this."

Mike Ridge wasn't willing to play the waiting game. After his son Michael sustained his third severe brain injury in three seasons of football in the Scotch Plains PAL League, Ridge told his son he could no longer play the sport.

Michael's football career was over at age 13 — before it had really started.

"It was hard to let it go," says Michael, now a senior at Scotch Plains-Fanwood High School in Union County. "My parents were definitely heavy on not letting me play. I was pushed to give it up, but at the same time I knew I had to. It was a matter of wasting my brain away."

For the Ridges, the decision was fairly easy. For others, that's not the case.

Glen Rock resident Debbie Kusant's son, Christopher, sustained a fractured skull and internal bleeding when he crashed heads with an opponent during a youth soccer game earlier this year at age 13. Christopher was rushed into surgery, where doctors placed seven titanium plates in his head.

Doctors cleared Christopher to play sports at full speed this month, leaving his parents to mull the heart-wringing decision: Tell their active son he can no longer play the contact-heavy sports he enjoys, or send him back on the field while they hold their breath.

"I said to my husband, 'My gosh, everything these days are contact. What are we going to do — put him in ballet?'" Debbie Kusant says. "If I don't let him do what his passion is, then what kind of life will he have?"

Matthew Stanmyre may be reached at **mstanmyre@starledger.com** and Jackie Friedman may be reached at **jfriedman@starledger.com**.