

Joseph Jimenez



Marian Moore



Adam Redlich



Mitchell Rubin



Nirav K. Shah

rash! You've seen it on television when watching a National Football League game. A receiver heading across the field goes up for a pass and, his eyes on the approaching ball, and he doesn't see the defensive back or safety heading straight for him, the metal of his helmet aimed at the receiver. Moments later, players on both teams gather in prayer, an announcer saying, "It's time like these that puts everything in perspective," as one or both players lay prone on the field, quiet reigning in a stadium that was a moment ago raucous with crowd noise.

The NFL has taken steps to prevent dangerous play that leads to head injuries and concussions, but still they occur, in sports on all levels.

"Concussions and sports related head injuries are an important topic because of the devastating consequences that can result from these injuries, including permanent physical and mental disabilities and even death. Because sports are so prevalent in our society, concussions are a fact of life," claims Dr. Joseph Jiminez of Performance Spine & Sports Medicine in Lawrenceville.

Scary stuff. Dr. Adam Redlich head injuries often, especially among middle and high schoolers involved in sports, as part of his practice at A+ Athlete - Sports Medicine, LLC in Robbinsville. And the injuries aren't limited to football. High contact sports like ice hockey, lacrosse, boxing, and mixed martial arts (MMA) are very common sports where concussions occur.

"Concussion in sports is just one condition that I treat as a Sports Medicine Specialist. I treat patients with all levels of activity: from the recreational athlete or "weekend warrior", to the elite athlete, to even the non-athlete—who may sustain an injury or develop a condition common in sports or those who engage in active lifestyles. Football and soccer are often associated with concussions."

Chronic Overuse Injuries

At A+ Athlete—Sports Medicine, LLC, the majority of what Dr. Redlich and his staff treats are musculoskeletal injuries that don't require surgery, and acute traumatic and chronic overuse injuries are typical mechanisms of injuries of the patients seen. And as team physician for both Allentown and Hightstown High Schools, A+ sees a high incidence of head injury and concussion, especially during the fall football season. "Most head injuries we see are concussion related," he says.

'In the past, terms getting your 'bell rung' or just getting a 'ding' were used to downplay what we now know really fall into the concussion category. Symptoms such headache, sensitivity to light or sound, difficulty concentrating, feeling mentally slowed down or in a 'fog' are common symptoms described by concussed patients. Most nead injuries do not cause paralysis or death, but the potential in contact sports always exists for spinal cord niury. Focal neurologic symptoms or signs, such as uncontrolled vomiting, change in vision, loss of feeling/ strength are more indicative of potential bleeding on the brain and require urgent action."

Concussion

According to Dr. Jiminez and recent data, anywhere from 1.7 to 3.8 million concussions occur every vear¹ with many more left unreported.2 Another study reported that up to 900 deaths per year related to sports related brain injuries,3 despite the fact that 90 percent of sports related brain injuries are categorized as "mild" traumatic brain injury (TBI) or concussions. Concussions are further divided into mild, moderate or severe depending on whether there is actual loss of consciousness or con-Fusion shortly after the injury.4

"Most concussions are mild and carry no long term risk of paralysis or death," says Dr. Mitchell Rubin, director of neurology for the Capital Institute for Neurosciences, part of Capital Health. "Multiple or repetitive concussions carrier a higher risk of long term

neurological impairment."

He and Dr. Jiminez agree. "Generally, the longer the confusion, loss of consciousness, or even memory loss lasts, the more severe the concussion," says liminez. "The bottom line is: the less severe the concussion, the LESS chance of having a permanent disability or death." However, he cautions that, even though a concussion is mild, it's nothing to scoff at. The brain is the orain. "If a mild concussion does hapben, as a physician, I am not conerned about whether the athlete will become disabled or die from that first mild' concussion. I am worried about that next hit. In fact, that next head njury could be the one that can make :hat child, teen, or young adult suffer

a coma or death from a traumatic bleed or hemorrhage in the brain."

Traumatic Brain Injuries

According to Marian Moore, trauma program manager, Bristol-Myers Squibb Trauma Center at Capital Health Regional Medical Center, the main age group seen at Capital Health is junior high and high school students that are participating in football, soccer, wrestling, basketball, and ice hockey.

"Traumatic brain injuries are typically caused by blows to the head, collision between the brain and the inside of the skull, or both," she said. "Some of the most common causes of traumatic brain injury include falls, transportation accidents and assaults. Transportation accidents account for more than half of all traumatic brain injuries, including concussions, and are the leading cause of traumatic brain injury in people under 75 years old. Falls are the leading cause of traumatic brain injury in people over 75 years old. Sports-related accidents account for about three percent of all traumatic brain injury cases."

She also adds that the period of rehabilitation can vary from same day to months depending on the grade (severity) of the concussion.

Center for

Neurologic Emergency Medicine

Capital Health also offers a specialized emergency department just for neurologic emergencies, known as the Center for Neurologic Emergency Medicine, led by Dr. Michael D'Ambrosio, director, neurological emergency department, under the direction of Dr. Veznedaroglu. The Center helps patients suffering from symptoms or complaints that are neurologic in nature, which can include head or spine trauma or injury, change in mental status, vision problems, vertigo, numbness, headaches, and seizures among a multitude of other disturbances that may indicate a neurologically focused emergency. It is the first program of its kind in the country.

And as for further combating this serious issue, Redlich feels having a good relationship between the school athletic trainer and team physician with open communication

and continuity of care is key. "As an event physician, on the sideline of home varsity football games alongside the school athletic trainer is a great way to recognize injuries when they happen and help monitor and gauge recovery. Establishing some baseline cognitive information is one step with the use of ImPACT Sports Concussion Testing System and utilizing it after an athlete sustains a concussion to help aid in the decision to returning and athlete to play. I have encouraged and helped facilitate the local high schools to obtain the program and to do baseline testing for its athletes, especially contact sports.

"Additionally, speaking with the athletes, parents, coaches, athletic trainers, athletic directors, school nurses and developing protocols on how the school 'Athletic Healthcare Team' can continue to raise awareness and respond to concussion among other sports- related injuries. This type of testing has been in place for years now at Rutgers University where I served as an assistant Team Physician during Sports Medicine Fellowship Training."

Education and Awareness Key

Nirav K. Shah, M.D., FACS Neurosurgeon and Spine Surgeon with Princeton Brain and Spine Care says his practice provides a concussion clinic and forum for patients to learn about concussions and concussion care. "This will serve as a center for baseline ImPACT testing or an objective test prior to the beginning of the sports season, in addition to providing an area for patients to come to after a concussion," Shah said.

"We have scheduled a concussion symposium to be held September 20,

2011 in Bucks County, which is open to the public to raise awareness," he added. "Additionally, Princeton Brain and Spine Care has partnered with local hospitals in proctoring and administering ImPACT baseline testing to local area high school and pre-high school athletes." The group has developed a website called concussiondiscussion.org that also provides information on concussion care.

And as fall sports season is here, Dr. Jiminez believes awareness is the key. "As another season of sports approaches for the fall season, coaches, athletes and families should educate themselves about concussions by looking at helpful links or websites from the Centers of Disease Control (CDC) http://www.cdc.gov/concussion/sports/index.html and by the NFL on concussions and the related Lystedt law: http://nflhealthandsafety.com/zackery-lystedt-law/states.

Local medical centers are also reaching out to their respective communities with worthwhile, educational programs. Saint Lawrence Rehabilitation Center of Lawrenceville held both a Sports Safety Clinic and its annual Bicycle Safety Rodeo and Safe Kids Day on Saturday, May 7, 2011. The former was held for coaches, athletic trainers, teachers and parents to increase knowledge and use of concussion prevention, recognition and response, baseline and post-concussion testing, return to play decisions, proper hydration and overuse injury prevention methods, while the latter provided children ages 3-12 and their families with an opportunity to learn about safety and prevention while participating in sports and other recreational activities.

"In addition," says Saint Lawrence Marketing Director of Community Relations Jane Millner, "we have a support group each month for patients and families of brain injuries and stroke. The group meets the first Wednesday of each month from 6:30-8:30 pm."

Capital Health is offering a lecture on September 13th Your Young Athlete: What You Should Know About Concussions, Asthma, and Cardiac Problems at Timberlane Middle School, 51 S. Timberlane Drive, Pennington, NJ. People can register online at http://capitalhealth.org/events.cfm?mdte=9&ydte=2011."We prove bicycle safety programs to all public school third graders in the city of Trenton. After they participate in the program each student receives a bicycle helmet," says Moore.