How Concussion Management and Awareness Training Saves Lives

Strong youth sports-related concussion safety laws are imperative for all communities.

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With the release of the movie "Concussion," there's been more attention on the impact of sports-related brain injuries and concussions on professional athletes. It has been suggested that while they may have...
enjoyed lucrative compensation packages or hall-of-fame careers, some of these athletes paid a high price with irreversible damage to their health. I hope this focus not only brings more light to the challenges facing elite athletes, but also helps student-athletes, whose brains are still developing and therefore more vulnerable to the serious ramifications of concussions.

Children and adolescents are at an increased risk for challenges from repeat concussions, including the need for longer recovery times, increased severity and, in some cases, severe physical complications or death. Today, research also suggests that the long-term effects of repeat concussions may cause epilepsy, cumulative neurological and cognitive deficits, depression, suicide, dementia, Alzheimer's disease, Parkinson's disease and other brain disorders.

To minimize the occurrence of concussions and mild traumatic brain injuries, or mTBIs, during sports, injury prevention strategies should be in place, including overall strength and conditioning, strengthening neck muscles, skill drills and using protective equipment. To lessen the impact of concussions and mTBIs, qualified health care professionals – certified athletic trainers, physicians, physical therapists, nurse practitioners and physician assistants in New York State – should be guiding concussion management: knowing the symptoms, responding appropriately and allowing subsequent participation only after the completion of return-to-play protocols.

As health care professionals and as parents, our greatest challenge is that there is no rule for how many times a person needs to get hit in the head to cause serious consequences. We do, however, know that repeat brain injury is a leading cause of death due to concussion. It's our responsibility to do everything we can to protect student-athletes and give their brains the necessary time to heal before returning to sports and activity.

Many people today are turning to physical therapists to evaluate and treat problems related to mTBIs and concussions. Because no two concussions are the same, a physical therapist will prescribe recovery programs appropriate for each person's condition and symptoms. When ready, a physical therapist can help one increase lost strength and endurance. If one is suffering from dizziness or difficulty with balance, vestibular physical therapy may help. By applying special treatments or teaching specific exercises, a vestibular physical therapist may be able to help reduce or stop dizziness or balance problems after a concussion. If one is suffering from headaches, a physical therapist may assess the possible causes, and then use treatments and exercises to reduce or eliminate the headaches. When treating the symptoms of a concussion, a physical therapist safely helps patients return to sports, activities and their normal life.

According to the Centers for Disease Control and Prevention, nearly 250,000 traumatic brain injuries or concussions are reported annually in persons aged 10 to 19 for sports- and recreation–related injuries. Many health care organizations, including the American Medical Association, American Physical Therapy Association and National Athletic Trainers Association, are advocating for prompt diagnosis and appropriate concussion management – those suspected of having a concussion or mTBI be removed from play, not be allowed to play the same day and only be allowed to return to play after clearance by a health care professional qualified in diagnosing and managing mTBIs.
According to the AMA, 59 percent of middle school female soccer players reported playing with concussion symptoms, with less than half being evaluated by a qualified health care professional; 15 percent of high school athletes with concussions returned to play prematurely; and nearly 16 percent of football players who sustained a concussion that resulted in loss-of-consciousness returned to play in less than one day.

With the vast majority of state departments of education and public health having developed regulations and guidelines to diagnose and manage concussions in student-athletes, these numbers should be substantially less.

New York is lauded for having enacted strong, if not the strongest, youth sports-related concussion safety laws that include biennial training on concussions, the signs and symptoms of mild traumatic brain injuries and return-to-play guidelines for coaches, physical education teachers, nurses and athletic trainers. In addition, each year an informational pamphlet on concussions must be provided to parents, physical education teachers, coaches, concussion management team members and any student-athlete who previously suffered an mTBI. All students and their parent or guardian must sign an acknowledgement that they have read and understood the pamphlet to be allowed to participate in interscholastic sports. Each school district and non-public school also must establish a concussion management team.

The most significant contribution of New York’s Concussion Management and Awareness Act is the optimal care for our student-athletes. Any student-athlete believed to have sustained a concussion or mTBI must be immediately removed from athletic activities, the occurrence must be reported to the Department of Health, and the student must undergo an evaluation. The student must be symptom-free for 24 hours – with written medical clearance required – before return to play.

Return-to-play protocols used by health care professionals, such as athletic trainers and physicians, were established to give athletes the necessary time to heal – at their own pace, recognizing that no two concussions are alike. The protocol our team of athletic trainers, who cover more than 1,000 youth sport events annually, uses includes multiple stages. A student cannot progress to the next stage until he or she has been completely cleared in the present stage.

While the average recovery time from a concussion is seven to 10 days, every incidence is different. We have experienced several students whose recovery time has been much greater. Some of our recent examples are: a 17-year old male student-athlete in Westchester County who was diagnosed with a concussion in December and did not return to school until the following September; a 16-year old female student-athlete in Nassau County who was not cleared to return to school for one year; and a 13-year old student-athlete in Westchester who was not cleared to return to school for about two months and was not cleared to return to sport for 12 months.

Often, student-athletes are eager to get right back into the game, whether that same day or within a short period of time. New York’s Concussion Management and Awareness Act helps ensure student-athletes do not return prematurely and put themselves at risk.
Strong youth sports-related concussion safety laws are imperative for all communities. Enacting effective return-to-play protocols that require passing of a previous stage to move on to the next gives student-athletes the time they need to heal and may lessen the severity of repeat concussions.

Parents, make no mistake about it, concussions are not just for football players. Most mTBIs and concussions in those under 19 happen during bicycling and football, but they also are common in basketball, soccer, playground activities, horseback riding, ice skating, golf, all-terrain vehicle riding, tobogganing, sledding and other activities. Learn about the signs and symptoms of concussions and mTBIs. If you suspect your child has sustained a head injury, immediately have him or her evaluated by a health care professional, and give your child all the time he or she needs to recover before returning to sports or recreational activities. If your community does not have sufficient concussion awareness and management regulations, advocate for effective laws to protect your children – including having a certified athletic trainer at all collision or contact sport events and practices.

And remember, when in doubt, sit them out.

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