



N.J. teen athletes prepare for broader medical screenings

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The nose guard got pretty banged up on that last play, so the team trainer quickly pulls him from the game.

The teen rests for a few days, out of concern for a possible concussion, but then claims to feel fine. He's given some tests that seem to indicate he's healed.

Is he ready to play again?

Despite medical advances, doctors have often had to reach a decision minus one crucial fact: How much do his test results differ from what they normally would be?

For that reason, New Jersey student-athletes ages 12 and older are now required to get more thorough physical exams before participating in any sports. The state regulation goes into effect Oct. 1.

Such exams will likely include a baseline concussion test — a 20-minute computer program that can chart an athlete's normal response to tasks involving verbal and visual reaction time, memory and concentration.

To be cleared to play, an athlete must heal enough to get back to his "baseline," or normal, performance on the test. It's designed, in part, to be a safeguard against both concussion's subtle symptoms and the strong desire — of athletes, their coaches and their parents — to get back in the game.

"I'm always being asked, 'When is he cleared to play?' The parents want to know, the coach wants to know," said Sean Lager, a Jersey City orthopedic surgeon. In 2005, he founded ClearedToPlay.org, a charity that provides free baseline screening for student-athletes.

Some schools administer the test to their athletes. If not, the school's athletic trainer will usually know where it can be taken locally. Parents also may be able to get their young athletes tested by their pediatrician, or at community screenings.

For example, Barnabas Health will be offering free screenings at seven of its hospitals, as well as free clinics on the next three Saturdays. (Both settings require appointments.) There, students will be given both the computer ImPACT test, or baseline concussion test, and an electrocardiogram, or EKG.

Much of the public discussion about sports concussions involves the long-term impact on professional athletes — particularly the retired NFL players who recently settled a lawsuit with the league.

Yet student athletes carry a special risk because of their youth, said John Shumko, a physician and medical director of Barnabas Health's Matthew J. Morahan III Health Assessment Center for Athletes.

Adolescent brains are not yet fully developed and are less resilient to injury. That makes them more prone to something called "second impact syndrome," a second concussion occurring before the first concussion has healed.

In such cases, it takes very little force to cause irreversible damage. Such a blow can result in increased blood volume and may result in brainstem herniation — or the brain being forced out of the bottom of the skull.

"If you don't detect a problem with the first concussion and that athlete goes on to sustain a second concussion, that second-impact concussion could be devastating, or even fatal," Shumko said. "And that can happen in minutes."

Like professional athletes, student athletes are under pressure — often self-imposed — to stay in the game. They'll minimize their injuries by saying they "got their bell rung," said Emil Matarese, director of the Concussion Program at Capital Institute for Neurosciences in Hopewell Township.

The new student physical form recognizes that tendency to minimize symptoms by broadening the question about concussions to include "bell rung" and "a ding."

Schools also are under a different kind of pressure, one imposed by recent lawsuit settlements that show taxpayers will be penalized if a district allows a concussed student to return to play too early.

Matarese said that he's recently noticed a change in the climate of pushing to return to play.

"I do see more players — and their parents — who are actually leery of returning to a sport until they're cleared," he said. Students have to complete a five-day program of monitored exertion before being allowed to return to competition.

Lager, of ClearedToPlay, offers an additional test that can track an athlete's recovery. The TRAZER Health Risk Assessment puts the student in a small room, then projects her avatar onto a screen as she responds to

various scenarios over 10 minutes. It ends up being a simulation of gamelike conditions, minus the risk, as it measures ocular motion, balance, acceleration, twisting and turning.

"It's easy for them to say they have no symptoms, but when you have them do the test and they fall over because they're completely dizzy, they're not ready to play," he said.

While student athletes with concussions are too young to manifest the dementia and other long-term ailments affecting retired NFL players, their academic performance can be harmed, said Matarese.

One of his patients seemed to have recovered from a concussion, yet when he went to college, he flunked every class. He got dizzy in the classroom when shifting his gaze from the chalkboard to his notes, couldn't keep his place on the page when reading, couldn't recall homework done the night before. He lost his scholarship.

Once he was properly diagnosed, he was gradually able to resume his college studies with disability accommodations, Matarese said.

Matarese cited two common misconceptions about concussions: The athlete doesn't have to lose consciousness to have received one, and they don't come exclusively from blows to the head. Any forcible jarring of the body can cause one.

While he applauds the increased focus on baseline screenings, he said he wishes they'd extend to all students, not just those who play scholastic sports. As it stands, the law doesn't cover athletes who compete outside of school, on travel club hockey or soccer teams, for example. Nor does it cover students who don't play after-school sports at all.

"You don't have to be on a sports team to be injured in the gym," he said.

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