

Test helps identify concussions

Preseason computer program catching on at area high schools

By AJ Mazzolini

THE COLUMBUS DISPATCH

A group of high-schoolers filed into a room lined with computers, an athletic trainer and other medical personnel leading the way. The athletes sat down and began clicking away, matching words, colors and images on the screens.

While not the usual setting for a preseason football practice, the 45-minute session could become more valuable than any other team meeting during the season.



► Tonight's games | C6

Computer game-like tests are among the latest tools being used in high schools and beyond as athletic trainers and physicians continue to wage a war on concussions.

ImPACT, or Immediate Post-Concussion Assessment and Cognitive Testing, is now used in 27 central Ohio high schools, as well as hundreds more around the country. The tests give doctors a clearer understanding of how the brain functions under normal conditions.

By testing athletes before any brain trauma, doctors have a baseline point for comparison if an injury occurs, said Jeff Sczpanski, an athletic trainer with OhioHealth who works with Hilliard Bradley athletics. A post-concussion test comparison can help determine whether it's safe for an athlete to

CONCUSSIONS

FROM PAGE C1

return to play.

"It's another tool we can use because concussions are very hard to manage," Sczpanski said. "It's not like an ankle sprain. You can't see the swelling; you can't see that they're not walking well."

The ImPACT test is a series of simple memorization and recognition drills. Lists of words and designs pop up on a screen, and athletes must remember and match them later. Another exercise tests reaction times by having the player click on numbers in order while sifting through a large jumble as fast as possible.

An athlete is likely to be much less sharp if symptoms of a brain injury are lingering, leading to a corresponding drop in scores and times. If a player returns to action too soon, chances of a repeat injury increase, as does the risk of severe damage.

ImPACT is nothing new in the medical world. Similar programs have existed since the early 1990s but were rarely available outside of neurology centers. Some schools in central Ohio, such as Dublin Jerome, have had access to the technology for the better part of a decade. But for most, it's a recent acquisition.

The availability continues to grow as prices for the program drop.

"The difficulty is at the high-school level. Not all schools even have trainers or the budget," said Dyanne Lewis, an athletic trainer at Worthington Kilbourne, now in its second year using ImPACT. "It's becoming a trend now as your corpo-

rations are helping to sponsor this to make the cost more feasible."

Tests such as ImPACT are available online, but without the guidance of a trained physician, they won't help much, said Dr. Steven Simensky, a neurologist and member of OhioHealth's sport concussion team. But it's a step in the right direction as more information becomes available.

Concussion education has led to an increase in diagnoses in recent years, he said.

"I think concussions have always been around. They've just been called euphemistically a 'bell ringer' or 'seeing stars,'" Simensky said. "But it's very, very significant. You're talking about a brain injury."

Because doctors now better understand the danger of multiple concussions, high schools are broadening the scope of who gets tested. Concussion-prone sports extend beyond football. Schools are administering ImPACT to athletes in other sports, such as soccer and wrestling, and activities such as cheerleading.

At Hilliard Bradley, the tests have helped senior Katie Lindsey on her recovery from multiple concussions. After she suffered five head injuries while playing soccer and basketball, doctors used the results from multiple ImPACT tests to help ensure her safety while she eased back into competition.

"My first impression was (ImPACT) was just like a lot of memory games," Lindsey, 17, said. "At the end, I felt good about it. I liked that option."

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