



Harrison Clark, seated, takes a baseline ImPACT test that measures verbal and visual memory, processing speed, reaction time and impulse control, as Aaron Clark, director of sports medicine at Quincy Medical Group, gives instructions. Harrison plays football, and if he would suffer a concussion he could take the test again. The results would be compared to the baseline test, which would help in the evaluation and management of the injury. (H-W Photo/Phillip Carlson)

By **KELLY WILSON**

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Quincy Medical Group's sports medicine team is offering area athletes a new tool in the evaluation and management of concussions.

ImPACT, a computer-based standardized testing program developed by concussion experts at the University of Pittsburgh Medical Center, is used in many professional, collegiate and high school sports programs.

The testing protocol aids in detecting the extent of a head injury and the amount of time needed for a full recovery.

"By objectively measuring concussion, neurocognitive tests such as ImPACT revolutionize the diagnosis and treatment of this injury," said Aaron Clark, director of sports medicine.

"This allows professionals the ability to provide safe, individualized treatment plans and return-to-play recommendations for the athlete," Clark said.

Dr. Anthony Biggs, medical director of sports medicine at QMG, used ImPACT (Immediate Post-concussion Assessment and Cognitive Testing) on athletes at Michigan State University, where he completed a fellowship in primary sports medicine in 2008.

"This program helps us provide more accurate treatment for an athlete's brain injury, especially helpful in determining healing time," Biggs said. "Athletes that are not fully recovered from an initial head injury are at greater risk for a repeated injury, which has a higher chance for life-threatening results."

The test takes 20 to 25 minutes, is set in a video game format and measures verbal and visual memory, processing speed, reaction time and impulse control.

Biggs and Clark encourage athletes to get a baseline test, so that when a concussion occurs the test can be taken again and results can be compared to the baseline data.

Clark considers the baseline test a "pre-season physical of the brain."

In the absence of a baseline test, the results can be compared to national normative data, Clark said.

Prior to using neurocognitive tests, Biggs said physicians could only rely on subjective reporting of symptoms from the athlete in determining the extent of a head injury.

After ImPACT

Quincy Medical Group offering program to help young athletes evaluate, manage concussions

"What we're finding is that if you ask a kid in person, particularly in front of a parent or coach, they're not likely to give you the full story. Kids might not share with us because they know it might mean them missing playing time," Biggs said.

Imaging studies such as X-rays, CT, MRI and EEG are not useful in recognizing the effects of concussion, only more serious issues like skull fracture, contusion or hematoma, Biggs said.

"What the ImPACT study does is it combines that subjective study with some objective data to be sure the brain is functioning correctly, not just that the kid is feeling better," Biggs said.

The ImPACT program can help pick up minor concussions that might have been missed otherwise, he added.

Biggs emphasizes that ImPACT testing doesn't mean an athlete will necessarily have to sit out longer.

In fact, studies find that "people that go through the ImPACT program are missing less time than if they were to go to their physician and get the routine exam," he said.

Biggs said head injuries are fairly common, affecting at least 300,000 high school athletes a year.

"We think that's even underestimated," he said. "Early management is the key, and protection during the 'golden period' so the metabolic function of the brain can return to normal."

Cost of a baseline ImPACT test is \$10, and testing after a concussion is typically covered by insurance.

For more information, call 228-2323 or go to www.quincymedgroup.com.

CONCUSSION SYMPTOMS



Many symptoms of concussions are subtle or may go unnoticed. Symptoms often include chronic headaches, personality change, fatigue, sensitivity to light or noise, dizziness when standing too quickly, short-term memory loss, and problems solving basic academic tasks.

Symptoms may last for only several minutes or as long as weeks, months or even more in some cases.

If there are any symptoms of a concussion, an athlete should not participate in sports or other at-risk activities.

