



Do you have a concussion? Let's ask the computer.

By: [Providence Medical Group](#)

It may get easier for health care providers to detect concussions after the U.S. Food and Drug Administration cleared a pair of computer-based tools intended to help measure a potentially injured person's memory, reaction time and processing speed.

The two tests—Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT) and ImPACT Pediatric—are the first such medical tests approved for post-concussion testing, the agency said. The tests were developed by ImPACT Applications of Pittsburgh.

The products already are in wide use by schools, professional sports teams and clinics, but the FDA approval is “a huge step forward for the industry, for athletes and others who are at-risk of concussion-related injuries, as well as for licensed, trained medical professionals,” said Michael Wahlster, ImPACT's CEO, in a prepared statement. The company said the FDA clearance validates the products' effectiveness.

An FDA official called the approved tests “a useful tool” to help physicians and nurses evaluate whether a patient has suffered a concussion.

He stressed that the ImPACT tests alone aren't enough to diagnose concussions, but can be a useful part of a provider's toolkit to assess potential head injuries.

The trouble with concussions

Concussions, which occur when the brain is jarred by an impact or shockwave, are a kind of traumatic brain injury that can be difficult to diagnose. Often, there is no obvious physical damage and symptoms may not appear for days.

Yet the brain has suffered an injury and should be allowed to heal. For example, an athlete who is known to suffer from a concussion is held out of practice and games until he or she is cleared by medical professionals. Multiple concussions can cause permanent neurological damage and even be life-threatening—hence the common coaches' phrase, “when in doubt, sit them out.” And athletes aren't the only people to suffer concussions. Concussion is common in young children, and they can happen to anyone.

The problem is detecting a concussion. The software tool is designed to give more objective information about a person's cognitive abilities than may be self-reported or observed.

Concussion symptoms

The U.S. Centers for Disease Control and Prevention says a person who has suffered a blow to the head may:

- Be unable to remember what happened before or after the impact
- Appear dazed
- Forget what is said to him or her, or be confused
- Move clumsily
- Respond to questions slowly
- Lose consciousness
- Show personality or mood changes
- Complain of pressure in the head
- Vomit or be nauseated
- Report dizziness or blurred vision
- Feel groggy
- Be sensitive to light or noise

The CDC says a person who may have suffered a concussion should be evaluated right after the injury and monitored for a few days following.

To learn more

The FDA statement, which explains its approval process for the new category of medical device, [is here](#).

ImPACT Applications' press release about the FDA approval [is here](#).

The National Institutes of Health published the results of its survey of ImPACT test takers in 2009. Its findings [can be read here](#).

The CDC provides an extensive overview of concussion symptoms, treatments and policies [at its Heads Up website](#).

If you think you or someone else has suffered a head injury, discuss your concerns with your health care provider immediately, or visit the nearest urgent care facility. If a severe injury, call 911.

