

More evidence that vision test on sidelines may help diagnose concussion

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A simple vision test performed on the sidelines may help determine whether athletes have suffered a concussion, according to a study released today that will be presented at the American Academy of Neurology's 66th Annual Meeting in Philadelphia, April 26 to May 3, 2014.

The study provides more evidence that the King-Devick test, a one-minute test where athletes read single-digit numbers on index cards, can be used in addition to other tests to increase the accuracy in diagnosing concussion.

For the study, 217 members of the University of Florida men's football, women's soccer and women's lacrosse teams took the King-Devick test and other concussion tests, including components of SCAT3, a tool for evaluating injured athletes, at the beginning of the season for baseline scores. A total of 30 of the athletes had a first concussion during the season and were tested again at the time of the injury or when it was reported.

The time to complete the King-Devick test (usually less than one minute) was longer for 79 percent of the athletes after the injury. A test of rapid number naming, the King-Devick test requires intact eye movements, language and concentration, all of which can be impaired as a result of concussion. When the test results were combined with those of the Standardized Assessment of Concussion and the Balance Error Scoring System, 100 percent of the concussions were identified. Athletes with

worse scores on the King-Devick test also were more likely to have concussion symptoms, especially sensitivity to light and noise.

"The visual pathways are commonly affected in concussion," said study author Laura Balcer, MD, MSCE, of New York University (NYU) Langone Medical Center in New York, NY, and a Fellow of the American Academy of Neurology. "Adding a vision-based test to evaluate athletes on the sidelines may allow us to better detect more athletes with concussion more quickly. This is particularly important since not all [athletes](#) reliably report their symptoms of [concussion](#), including any vision problems."

Provided by American Academy of Neurology

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