

[Subscribe](#) | [Subscription Renewal](#) | [Advertise in Army Times](#) | [About Army Times](#) | [Customer Service](#) | [RSS](#) | [Digital Edition](#)
[Login](#) | [Register](#)



<http://www.armytimes.com/news/2011/12/military-tbi-blood-tests-121311w/>

Blood test shows promise in diagnosing TBI

By [Patricia Kime](#) - Staff writer

Posted : Tuesday Dec 13, 2011 14:35:23 EST

The Pentagon is looking at several diagnostic tools to detect concussions, but none is likely to be a single “magic bullet” that will determine the extent of a mild head injury, a Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury official said Dec. 8.

Instead, field medical personnel and physicians likely will use several methods, including current interpretive assessments, to decide whether a service member is healthy enough to return to duty after a head knock or concussive blast, according to Katherine Helmick, deputy director for TBI at the centers.

Among the instruments attracting interest is a hand-held device that tests for protein fragments released into the bloodstream after a head injury. In a small Army study, the test accurately detected concussion, or mild traumatic brain injury, in 34 patients.

A large-scale clinical trial of the device is underway at 30 trauma centers nationwide. It is expected to wrap up in 2012.

But other testing tools also are being considered, Helmick said, including:

- A computer device called EYE-Trac that assesses visual cuing to determine inattention and memory loss, both classic concussion symptoms
- Lab tests for biological markers found in saliva or on skin after a brain injury
- Advanced magnetic resonance imaging that paints a portrait of a working or malfunctioning brain

Objective tests for a concussion would remove the somewhat subjective nature of current assessments distributed to injured troops after an event or much later, when service members are assessed for disability claims, Helmick said.

“You can often ask a service member if they have a headache, and they tell you, ‘I’m good to go,’ and they are totally faking it. You can make them run five minutes and ask them again, and they can have the worst headache in the world, and they still tell you, ‘I’m great.’ They want to get back in the fight,” she said.

Mild traumatic brain injury accounts for 80 percent of the TBI diagnosed in the military.

From 2000 and 2005, the number of service members diagnosed with TBI was fairly stable, between about 11,000 to 13,000 each year. The figures have skyrocketed since 2006, from 16,195 to 31,243 in 2010. For the first three quarters of fiscal 2011, the figure is 36,000.

“But the number of TBI patients, even in peacetime, was 11,000, so this is not just a wartime

issue,” Helmick said in her address at the DCoE Trauma Spectrum Conference in Bethesda, Md.

A test for concussion is considered a medical Holy Grail because immediate diagnosis could lead to improved treatment and recovery.

Army Vice Chief of Staff Gen. Peter Chiarelli has said a TBI blood test will “change medicine in a huge way.”

And Helmick said researchers are under the gun to develop one, as well as other TBI treatments.

“There’s been a paradigm shift in research, with extreme pressure to develop safe and effective treatments, but to get the ball rolling as fast as we can,” she said.

Military physicians now rely on magnetic resonance imaging and brain scans to determine the extent of a trauma, but these tools are used most reliably for severe or penetrating head wounds.

For mild TBI, clinicians use the automated neural assessment metrics computer program, or ANAM, and neurocognitive assessment tests to determine whether troops have experienced an injury.

The ANAM, which is supposed to be given to all troops before they deploy, recently came under fire in a National Public Radio/ProPublica media investigation that charged the \$42 million program is not being carried out as ordered by Congress and some military leaders have little faith in it.

“From interviews with dozens of medical specialists and an analysis of hundreds of pages of military emails and documents, evidence shows that military officials have made poor decisions about the testing program, preventing it from helping many troops who have brain injuries,” according to NPR/ProPublica.

The NPR report found the ANAM was not used as directed, and clinicians lacked confidence in its capabilities.

But the test was never intended to be a tool for assessing a general population before or after a deployment, Helmick said. ANAM, she said, and neurocognitive assessments are effective post-injury assessment tools.

“The whole intent is it gives you a baseline for how people function before they go to the theater. Then, if they are injured, you compare the results with their own baseline. It’s an added data point,” Helmick said.

In addition to searching for diagnostic tests, researchers also are looking for solutions to treat the symptoms of mild TBI, including memory loss, confusion and irritability. Among the treatments being studied by DoD are omega-3 fatty acids, hyperbaric oxygen therapy, growth hormones and progesterone.

Videos You May Be Interested In

TOP VIDEO

by Taboola

PICKS

**Sec. of Defense
Speaks to Troo...**
(3m25s)

[Traumatic Brain Injury](#)

TBI symptoms, definition & facts to understand the injury & find help.

BrainLine.org/TraumaticBrainInjury

**Military Times:
SitRep Online f...**
(2m1s)

[Brain Training Games](#)

Improve memory and attention with scientific brain games.

www.lumosity.com

**Top Military
Leaders Take ...**
(3m1s)

AdChoices 

Leave a Comment



Add a comment...

Posting as Peter
McCall (Not you?)

Comment

Post to Facebook

Facebook social plugin