

‘An Immediate Battlefield Assessment’

A new rapid traumatic brain injury test could be a step forward in the military’s efforts to provide forward- deployed troops with higher-quality health care

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The Food and Drug Administration (FDA) in March approved the use of a new rapid blood test that can diagnose a mild traumatic brain injury (TBI) in a combat or training environment where advanced equipment is not available.

The new test can give health care providers results in about 15 minutes using a small blood sample. The portable blood analysis system is a faster alternative to traditional methods, such as computed tomography (CT) scans or magnetic resonance imaging (MRI) tests. In addition, patients can be evaluated up to 24 hours after an injury with the new device.

“This will help provide an immediate battlefield assessment of potential trauma and facilitate the necessary high-quality care required to mitigate any long-lasting effects,” said VFW National Veterans Services Director Michael Figlioli. “The VFW believes this advancement also will make it easier for veterans to receive any post-service health care related to these types of injuries and substantiate any future disability claims.”

Developed by the Army in collaboration with Abbott Laboratories, the testing device uses a small blood sample to determine if an individual sustained a concussion. Administering the test on-site will ensure troops receive timely medical treatment that could potentially allow for a faster recovery time and reduce long-term damage.

Health care providers use a portable cartridge-based device called an i-STAT for the blood analysis. The FDA approval of the device is part of the ongoing efforts to enhance military medical care. Nearly 500,000 troops were diagnosed with a TBI between 2000 and 2023, according to an Army press release. The Army also reported that concussions are the most common type of TBI among soldiers.

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Army Lt. Col. Bradley Dengler, director of the Military Traumatic Brain Injury Initiative at Maryland's Uniformed Services University, said the new test "can help get the most severely injured service members to neurosurgeons faster," potentially saving lives.

"Given the large numbers of expected casualties with all severities of traumatic brain injury in future large-scale combat operations, this test can help maintain combat power far forward by helping to eliminate unnecessary evacuations," Dengler said.

Dengler added that future versions of the device could be used to evaluate more severely wounded troops on the battlefield. He said elevated "biomarkers" in a patient's blood correlate with the severity of the wound.

This article is featured in the 2024 November/December issue of [VFW magazine](#), and was written by [Dave Spiva](#), associate editor for VFW magazine.