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U.S.

Weapons Training Likely Causes Brain Injury in Troops, Study Says

Gauges worn on troops' helmets and body armor register substantial blasts in combat and in training



U.S. Marines launch a mortar during a joint exercise with Japan's Ground Self Defense Force in August. Repeated use of such weapons in training could cause brain damage, a new study says. PHOTO: TORU HANAI/REUTERS

By Ben Kesling

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WASHINGTON—Thousands of U.S. troops are likely suffering traumatic brain injury not just from battlefield explosions but from repeated exposure to trauma while training on their own weapons, according to a new study.

Service members, even those who may not have seen combat but specialize in using high explosives or weapons such as rocket launchers, could have lasting brain damage from the pounding on their necks and heads, researchers at the Center for a New American Security said in a report released Monday. The defense think tank is a

nonprofit organization funded by the federal government and public- and private-sector donors.

“It’s analogous to people getting hits to the head in sports, playing football or boxing,” said Paul Scharre, a senior fellow at the center. “This is not really well understood, the primary blast effects on the brain. Exactly how it affects the brain is unclear, but the fact that it is having some kind of negative effect is now being shown.”

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Shoulder-fired rockets and rocket-propelled grenades don’t shoot away with a “whoosh” as they are sometimes portrayed in movies. They go off with an ear-ringing boom that troops sometimes liken to getting punched in the side of the head. The Defense Department has long acknowledged this and has limits on the number of rounds troops can fire at any given time. But the Pentagon didn’t take a hard look at the harm these blasts could cause until recently.

The Department of Defense started diagnosing and tracking traumatic brain injury just before the wars in Iraq and Afghanistan began. TBI has become one of the signature injuries of the current generation of troops, with some 380,000 personnel affected by it, according to the Defense Department.

The military sporadically has used blast gauges, small devices worn on troops’ helmets or body armor, to better understand the effects of explosions in combat. Researchers began to notice that these gauges weren’t just registering substantial blasts in combat, but in training, too.

Researchers drew on Defense Department data, blast-effect research on animal subjects and computer modeling to reach their conclusions, noting that military officials have expressed concern about the issue and say it needs further examination.

Researchers and officials say available data is insufficient.

Using weapons such as shoulder-fired rockets in combat and training is a necessity, Mr. Scharre said, but the military can do more to manage the risks. One of the reports' recommendations is for the military to track when troops fire the weapons in training, partly so troops can be treated for injuries later and compensated for disabilities.

“They would have a record of times of exposure, how frequent, the amount of ammunition shot and over what time period,” said Lauren Fish, co-author of the report.

The military can also do more to develop helmets that protect troops from the blast wave that splits the air in an explosion, researchers said. Those helmets could include jaw protection and visors to resemble a motorcycle-racing helmet, which may not be practical in combat but would be useful in training environments.

Representatives from a number of veterans' advocacy organizations, including those who help vets with disability claims, said they haven't noticed vets complaining about the problem or making claims to the Department of Veterans Affairs for compensation in the matter.

That could be because there isn't a major problem, or because vets don't yet realize the problem. It took time for those affected to recognize the long-term effects of Agent Orange on their health.

VA spokesman Curt Cashour said the department hasn't undertaken the time-consuming process of reviewing individual cases to determine whether vets are claiming harm from repeated exposure in training. He said the VA and the Pentagon “are studying the effects of mild TBI that can be caused by blast exposure in both active-duty service members and veterans,” but those enrolled in current research don't show effects from repeated exposure to their own weapons.

The Defense Department didn't respond to requests for comment.

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