

New research shows risk of ALS exposure in Gulf War veterans is time limited

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A new study, led by researchers at the University of Cincinnati (UC), says that cases of Amyotrophic Lateral Sclerosis (ALS) among soldiers who served in the first Persian Gulf War were caused by certain events during their deployment to the war zone, meaning the exposure and illness is not as widespread as previously thought. The study is being published in the July issue of *Neuroepidemiology*.

Ronnie Horner, PhD, lead author of the study, along with colleagues at Duke University Medical Center found that among the 124 cases of ALS studied, 48 occurred within those soldiers deployed to the Persian Gulf region.

Horner says most of the deployed soldiers who developed ALS had disease onset in 1996 or earlier.

"The outbreak was time-limited," he continues. "We actually saw a declining risk after 1996; therefore, the risk is not continual. The pattern of disease onset suggests that whatever exposure occurred among these soldiers most likely happened sometime between August 1990 and July 1991, the period of the first Gulf War."

ALS is a fatal neurological disease caused by the degeneration of nerve cells in the central nervous system that control voluntary muscle movement. It is commonly known as Lou Gehrig's Disease after the baseball Hall of Famer who died of it in 1941.

Horner, director for the Institute for the Study of Health at UC, says it is an illness that usually affects people in their 60s and 70s.

"When it started occurring in veterans in their 30s and 40s—a low-risk population—researchers knew that something had occurred during that conflict to cause these affects."

The recent study builds on research published in 2003 that showed there was a two-fold increased risk of ALS among 1991 Gulf War veterans.

To gather this information, researchers screened medical files at Veteran Affairs and Department of Defense hospitals nationwide in search of patients with ALS or other motor neuron diseases. They also advertised a toll-free telephone number for Gulf War veterans to call if they had been diagnosed with ALS.

After identifying patients, the investigators verified their illness through medical record review or medical examination by neurologists who were experts in ALS.

The study indicated that these veterans had a higher-than-expected risk of ALS but did not answer whether the risk had diminished over time or what had caused the risk.

Now, researchers at Duke, Durham Veterans Affairs Medical Center and UC are taking it a step further and are conducting studies to find possible exposures these veterans had while deployed to the Persian Gulf area that may be the cause of the outbreak.

"We want to find out if there are specific areas where the soldiers moved through," Horner says. In addition, he says researchers are looking at the contributions of specific incidents—for example, the demolition of the munitions dump at Khamisiyah, Iraq, that released a low level of nerve

agent, and smoke from the oil well fires—to the heightened risk of the disease in soldiers.

"With this information, we may be able to discover what caused the ALS outbreak and hopefully prevent similar instances from occurring in the future," Horner says.

Source: University of Cincinnati

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