

# Combat exposure may increase likelihood of newly reported high blood pressure

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A survey of American servicemen and women who reported experiencing multiple combat exposures were more likely to self-report high blood pressure than military members not exposed to combat, according to research reported in *Hypertension: Journal of the American Heart Association*.

In a new population-based prospective study, researchers analyzed 36,061 service members, including a sub-group of 8,829 deployed in support of operations in Iraq and Afghanistan between 2001 and 2003. After a three-year follow-up, researchers found that:

- Deployed service members who reported multiple combat exposures were 33 percent more likely to self-report high blood pressure than those who did not report combat exposures.
- Those deployed but not exposed to combat were 23 percent less likely to self-report hypertension compared to those not deployed — possibly because deployers are generally healthier than nondeployers.
- Among deployed personnel, non-Hispanic blacks were 97 percent more likely to self-report hypertension than non-Hispanic whites while [Hispanics](#) were 50 percent more likely than non-Hispanic whites to report hypertension.

High blood pressure, or hypertension, in this study was defined through self-report. Persons who, at follow-up, reported being told by a doctor or health professional that they have high blood pressure were classified as having newly reported hypertension if they did not indicate the condition at baseline.

"Deployment with multiple combat exposures appeared to be a unique risk factor for newly reported hypertension," said Nisara S. Granado, Ph.D., lead author of the study and Epidemiologist at the Department of Defense Center for Deployment Health Research at the Naval Health Research Center in San Diego, Calif.

When researchers analyzed each type of combat exposure, they found that personally witnessing or being exposed to death due to war or disaster was significantly associated with increased likelihood of newly self-reported hypertension both at single (50 percent) and multiple (43 percent) exposures.

Their research is part of the Millennium Cohort Study, which is the first to prospectively investigate the relationship between military deployments and newly reported high blood pressure in a large young adult population (average age 35), researchers said. The study focuses on long-term health consequences related to deployments in support of the current operations in Iraq and Afghanistan.

Researchers identified those who self-reported high blood pressure at the three-year follow-up, but not at the initial survey, as newly reported high blood pressure. When self-report was evaluated against at least one electronic inpatient or at least two outpatient codes from Department of Defense databases, there was moderate agreement.

Deployed service members in general were less likely to self-report [high blood pressure](#) when compared to nondeployed service members,

researchers said. But deployment with multiple stressful combat exposures appeared to be a unique risk factor for newly reported hypertension.

Overall, among deployers and nondeployers, newly reported hypertension was identified in 6.9 percent of the population within 3 years. Overall, other factors associated with newly reported hypertension included:

- **Obesity:** Obese personnel were three times more likely to self-report hypertension than those who were normal or underweight.
- **Race:** Non-Hispanic blacks were 84 percent more likely to self-report hypertension than non-Hispanic whites.
- **General health:** Those reporting poorer general health were 68 percent more likely to self-report hypertension than those with excellent general health.
- **Duty status:** Those on active duty were 19 percent more likely to self-report [hypertension](#) than those in the Reserves or National Guard.

Of the overall military population studied, 26,154 were non-Hispanic whites compared to 3,837 non-Hispanic blacks. Military women represented 8,234, while men represented 27,827. At least 85 percent of those with combat exposures were men. Of those exposed to combat, the majority were non-Hispanic whites, with close to 10 percent comprised of non-Hispanic blacks.

Previous research has shown that although some distributional differences exist within these data, the study population well represents

the U.S. military.

Source: American Heart Association ([news](#) : [web](#))

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