

Another way dogs help the military—aeromedical patient evacuations

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Credit: Nik Shuliahin, CC0

They're physically and emotionally wounded—most likely suffering from post-traumatic stress. Members of the United States military who serve abroad often return to the U.S. to treat their injuries and must be transported by aeromedical evacuation between medical facilities. Those who undergo these types of evacuations are in states of both chronic and acute stress.

While much is known about the benefits of animal-assisted interventions in a variety of health care settings, there is limited evidence of the biological and psychosocial effects of this form of interaction in the military population, particularly in an aeromedical staging facility setting.

A study led by a Florida Atlantic University researcher in the Christine E. Lynn College of Nursing, Cheryl A. Krause-Parello, Ph.D., R.N., and collaborators, sought to test the feasibility and effectiveness of animal-assisted interventions to reduce [stress](#) in aeromedical staging facilities. For the study, they teamed up with a local not-for-profit animal organization that trains [therapy dogs](#) to visit [health care facilities](#), libraries, and other community based settings with a certified dog handler.

"We know that stress can impede healing, which is why it's so important for practicing clinicians in aeromedical staging facilities and other health care settings to examine ways to reduce patient stress," said Krause-Parello, senior author, founder and director of Canines Providing Assistance to Wounded Warriors (C-P.A.W.W.) at FAU, the Sharon Phillips Raddock Distinguished Professor of Holistic Health in FAU's Christine E. Lynn College of Nursing, and a faculty fellow in FAU's Institute for Human Health and Disease Intervention (I-HEALTH), one of the university's four research pillars. "If animal-assisted intervention is effective in reducing stress, then this novel, innovative, and noninvasive intervention could easily be incorporated into these and other military settings."

For the study, recently published in the journal *Stress and Health*, the researchers examined the stress biomarkers cortisol, which affect the cardiovascular system and result in higher blood pressure, alpha-amylase, an enzyme, and immunoglobulin A, a blood protein that impacts the immune system, which were collected at regular intervals.

The study sample included 120 military members ages 18 to 55 years old who were undergoing aeromedical evacuation. The majority of the male and [female participants](#) were in the Army (56.2 percent) followed by the Air Force (30.6 percent), Navy (7.4 percent), and Marine Corps (5 percent).

Results showed that an animal-assisted intervention in aeromedical staging facilities is both feasible and effective at reducing stress. Cortisol levels decreased significantly in the study participants following a 20-minute animal-assisted intervention. Patients with higher post-traumatic stress had a greater reduction in stress associated with immunoglobulin A, compared to those in the control group. Patients who participated in animal-assisted intervention experienced greater decreases in stress biomarkers than those who participated in the control group, regardless of post-traumatic stress symptom severity.

"The response to the animal-assisted intervention in our study was overwhelmingly positive," said Krause-Parello. "Study participants told us that they enjoyed interacting with the dogs, and the staff at the aeromedical staging facility also enjoyed visits from the dogs and their handlers."

Chronic stress is associated with increased morbidity and mortality from numerous physical and mental health disorders including heart disease, kidney disease, stroke, diabetes, obesity, ulcer, depression, anxiety, and post-traumatic stress disorder (PTSD).

"Results from this cutting-edge, nurse-led study by Dr. Krause-Parello and her colleagues offer promising, significant contributions to the field and to the military to support care of wounded service members. The finding that the animal-assisted [intervention](#) significantly reduced stress levels in post-[traumatic stress](#) symptom severity is powerful, especially in light of high rates of PTSD, cost of treatment, and the related co-

morbidities," said Safiya George, Ph.D., R.N., dean of FAU's Christine E. Lynn College of Nursing.

More information: Cheryl A. Krause-Parello et al. Relation of PTSD symptom severity to the efficacy of an animal-assisted intervention for stress reduction after military aeromedical evacuation, *Stress and Health* (2019). [DOI: 10.1002/smi.2881](https://doi.org/10.1002/smi.2881)

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