



VA Research Currents

Gulf War vets at no higher risk for neuropathy

Veterans who served in the Persian Gulf during the Gulf War are at no higher risk for peripheral neuropathy than veterans of the same era who did not serve in the Gulf, reported VA researchers in the Sept. 28 issue of the journal *Neurology*.

Researchers at 16 VA medical centers conducted in-depth medical and neurological exams on nearly 2,200 veterans and more than 1,000 of their spouses between 1999 and 2001. Peripheral neuropathy involves damage to nerves in the extremities, especially the feet. The first signs may include burning pain and loss of feeling in the toes and eventually the whole foot.

Previous studies of returning Gulf War veterans suggested they were more likely than non-deployed veterans to have the condition, possibly due to toxins, vaccinations or certain medications used during the war. Most of those studies, however, relied on reports of symptoms, not objective tests. Experts say peripheral-neuropathy symptoms may not always indicate actual damage to the nerves.

The new VA study, which included the most extensive neurological exams ever performed on Gulf War veterans, found no higher prevalence of peripheral neuropathy among those who served in operations Desert Storm and Desert Shield. The condition was seen in 6.3 percent of the 1,061 deployed veterans and 7.3 percent of the 1,128 non-deployed veterans tested in the study. The difference was not statistically significant.

“We see this study as good news for our veterans who served in the Gulf War, since it demonstrates that they were unlikely to have been exposed to

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NIH funds new clinical center at Sacramento

The Sacramento VA Medical Center is home to a new General Clinical Research Center (GCRC). The National Institutes of Health fund 81 such centers throughout the nation, with at least five based or co-located at VA medical centers.

The new center is a partnership between the VA Northern California Health Care System and the University of California, Davis, School of Medicine. The 8,000-square-foot center is directed by endocrinology researcher Lars Berglund, MD, PhD. Studies already under way are focusing on obesity, osteoporosis, and cardiovascular risk factors.

The grant is for five years, with the first year funded at \$600,000. The center includes a wet laboratory, specially equipped kitchen to prepare food for specific diets, inpatient and

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Puget Sound researcher will help lead major Alzheimer's genome project

Gerard Schellenberg, PhD, associate director for research at VA's Puget Sound-based Geriatric Research Education and Clinical Center, is co-principal investigator on a grant from the National Institute on Aging (NIA) for a whole genome association study of Alzheimer's disease. The goal is to identify the genetic determinants of the disease, which affects some four million Americans.

Schellenberg will collaborate with scientists at Perlegen Sciences, Inc., to study and compare the genetic makeup of individuals with late-onset Alzheimer's and those without the disease. The company uses a technology called high-density oligonucleotide array-based genotyping

that speeds the identification of genetic variations. “This collaboration between Veterans Affairs researchers, other academic collaborators, Perlegen and the National Institute on Aging will bring unprecedented technology to bear on finding treatments for Alzheimer's disease,” said Schellenberg.

To date, four genes have been implicated in the inheritance of Alzheimer's. In Schellenberg's previous NIA-funded work, he and his team found mutations that cause frontotemporal dementia in the gene encoding tau. Tau is the main protein in the neurofibrillary tangles found in both Alzheimer's and frontotemporal dementia. ■

Study shows high rate of violence against women in military

Four in 10 women veterans who took part in a recent VA study said they were raped or assaulted during their service. The study, published in the September *Journal of Women's Health*, showed that women who said they experienced repeated violence had more outpatient visits and poorer health than women who had been victimized only once, or who had never been attacked. Those who suffered repeated violence were also more likely to report a history of childhood violence and post-military violence.

According to lead author Anne G. Sadler, RN, PhD, and colleagues, the study suggests that repeated violence—as opposed to a single episode—may have a particularly strong adverse effect on women's health.

“Our findings indicate that it is necessary to include the concept of repeated violence in any future research studies of the health effects of violence,” wrote the authors.

The study included 520 women veterans from six cities who served during the Vietnam or subsequent eras. The women were selected from a registry made up primarily of women

who had used VA health care or sought a disability rating.

Rape was reported by 29 percent of the participants, and physical assault by 36 percent. More than half the women reported some form of physical or sexual violence before their military service. About half of these women said they joined the military to escape an abusive or distressing home life. ■

New ‘Human Motor’ lab opens in Gainesville

VA's Brain Rehabilitation Research Center, based at the Gainesville VA Medical Center, and the Brooks Center for Rehabilitation Studies at the University of Florida have partnered to open a new 2,500-square-foot lab to study disorders affecting movement, such as brain and spinal cord injury.

The Human Motor Performance Laboratory, opened this spring, features state-of-the-art equipment such as the Lokomat, a high-tech treadmill that supports patients' body weight and robotically guides their legs in a walking motion. Studies suggest such exercise can “retrain” the nervous system and restore walking ability in those with incomplete spinal cord injury—where only some of the brain signals to body parts below the injury are blocked.

Other equipment at the lab will measure and analyze normal and abnormal movement and metabolic function. A special focus of research will be oral motor and lower-limb motor performance. The lab is directed by Steven A. Kautz, PhD.

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substances that permanently damaged their peripheral nerves,” said lead author Larry E. Davis, MD, chief of neurology at the Albuquerque VA Medical Center.

The men and women in the study underwent about 12 hours of evaluation. The tests included histories, physical exams, blood work and nerve conduction studies, which use electrodes to gauge how well nerves relay electrical signals to muscles.

The same tests, minus the nerve conduction studies, were performed on 484 spouses of deployed veterans and 533 spouses of non-deployed veterans. The study included spouses on the theory that veterans may have brought home illness-causing germs or toxins. Only about 3 percent of spouses in either group showed signs of peripheral neuropathy.

The researchers ran the numbers again after excluding 44 veterans with underlying medical conditions that might cause neuropathy, such as diabetes or kidney failure. The results remained the same.

The investigators also analyzed a subgroup of deployed veterans who were at high risk for exposure to neurotoxins when U.S. forces blew up the Khamisiyah ammunition dump in 1991. The site was reported to have stored chemical weapons. The researchers found no difference between these personnel and other deployed veterans.

Collaborating with Davis and his team at the New Mexico VA Health Care System were neurologists and specialists in nerve-conduction testing at 16 VA sites. The study was coordinated by VA's Cooperative Studies Program Coordinating Center in Hines, Ill. ■

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VA study finds rural veterans in poorer health than urban peers

A study of more than 767,000 veterans by VA researchers showed those in rural areas are in poorer health than their urban counterparts. The findings, reported in the October *American Journal of Public Health*, validate recent and ongoing VA efforts to expand health care for rural patients.

“We need to think about veterans who live in rural settings as a special population, and we need to carefully consider their needs when designing healthcare delivery systems,” said study leader William B. Weeks, MD, MBA, a physician and researcher with the White River Junction VA Medical Center and Dartmouth Medical School. Senior author on the study was Jonathan B. Perlin, MD, PhD, VA’s acting under secretary for health.

The study included 767,109 veterans who had used VA healthcare between 1996 and 1999. VA had then just begun setting up Community

Based Outpatient Clinics (CBOCs) to provide primary care closer to home for rural veterans. Today there are nearly 700 CBOCs in VA’s nationwide system, and recent recommendations from VA’s Capital Asset Realignment for Enhanced Service (CARES) initiative call for the establishment of more than 150 additional CBOCs.

The new findings do not reflect the impact of existing CBOCs, said Weeks, but they do “validate that better access to care is needed in rural settings.”

The new study is the first nationwide comparison of the health status of rural versus urban VA patients. The researchers used a questionnaire called the SF-36, which measures eight areas of physical and mental health. The average physical health score among rural veterans was around 33, compared to 37 for urban veterans. The disparity was somewhat less marked in mental health: Rural veterans scored 44.5, compared to 45.6 for

urban veterans. The average score for all U.S. adults, young and old, is 50 for both the physical and mental component. Veterans tend to be in worse health than the general U.S. population, partly because on average they are older. The average age of VA patients in the study was 63.

The finding that rural veterans are in poorer health persisted even after researchers adjusted for socioeconomic factors that may tend to be different among rural and urban veterans, such as race, education or employment status.

Weeks said access to care may be a key factor in why rural veterans appear to be in poorer health. He said that in addition to establishing more clinics in rural areas, VA should consider coordinating services with Medicare or with other healthcare systems based in rural areas. He pointed out that while VA’s CBOCs provide primary care, they may not fully address rural veterans’ needs for specialty or hospital care. ■

Hawaii study cites link between walking and reduced dementia risk

In a study of more than 2,000 older Hawaiian men, those who walked less than a quarter of a mile per day, on average, were nearly twice as likely to develop dementia compared to those who walked more than two miles per day. The study, which appeared in the *Journal of the American Medical Association* on Sept. 22, was based on the Honolulu-Asia Aging Study. That wide-reaching effort, which grew out of the Honolulu Heart Program, was launched in early 1990s to learn more about neurodegenerative disease and cognitive function in older adults.

The study was led by Robert D. Abbott, PhD, of the University of Virginia and included senior author Helen Petrovitch, MD, and co-author G. Webster Ross, MD, of the Honolulu VA Medical Center. The researchers tracked

2,257 physically well men, all non-smoking and of Japanese descent, from initial assessments in 1991 to 1993 through two follow-up neurological exams in the mid- and late-1990s. The link between greater amounts of walking and reduced risk for dementia persisted even after accounting for other factors, including the possibility that some men who walked less were limited by physical decline due to early-stage dementia.

The authors say the findings suggest that promoting active lifestyles could promote cognitive health in later life, although Abbott pointed out in a news release that “people who are active tend to adhere to a healthier lifestyle and a better diet than those who are inactive. All of these factors could be working together in determining overall vitality and how healthy our brain is.” ■

Career milestones

Rory Cooper, PhD, director of VA's Center of Excellence for Wheelchair and Related Technologies, was appointed the first holder of the Chair for Rehabilitation Engineering at the University of Pittsburgh. The position is endowed by the Federation of Independent School Alumnae Foundation and the Paralyzed Veterans of America. Cooper recently received the American Paraplegia Society's 2004 Excellence Award for demonstrating leadership and expertise in the field of spinal cord injury health care, research and education.

A research team from the Memphis VA Medical Center took part last month in the 11th Asia Pacific League of Associations for Rheumatology Congress in South Korea. Researchers making presentations on arthritis and related topics included **Andrew H. Kang, MD; John M. Stuart, MD; Arnold E. Postlethwaite, MD; Karen A. Hasty, PhD;**

Edward F. Rosloniec, PhD; David D. Brand, PhD; Michael A. Cremer, MD; and **Linda Myers, MD.** Kang was VA's 2003 Middleton Award recipient.

David E. Arterburn, MD, MPH, Cincinnati, is this year's recipient of the Milton J. Hamolsky Junior Faculty Award from the Society of General Internal Medicine. Arterburn is studying health care utilization and costs for veterans with obesity.

John F. Hurdle, MD, PhD, an investigator with the VA Geriatric Rehabilitation Education Center in Salt Lake City, received a Biomedical Informatics Fellowship from the National Library of Medicine. Hurdle is exploring ways to better use clinical notes to identify potentially harmful drug events.

Joel Tsevat, MD, MPH, a health services researcher at the Cincinnati VA Medical Center, received the Eugene Saenger Award from the Society for Medical Decision Making. Tsevat's current work focuses on quality of life in HIV. ■

Letter of Intent policy changed

The Office of Research and Development has changed certain procedures applying to Letters of Intent for Merit Review or Investigator Initiated Research projects.

For example, in Biomedical Laboratory R&D and Clinical Science R&D, the requirement to submit an LOI for Merit Review submissions has been rescinded. In Health Services R&D, the requirement to submit an LOI for Investigator-Initiated Research is likewise rescinded. Rehabilitation R&D will still require the letters.

See the VA Research website (va.gov/resdev) for full details.

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outpatient rooms, facilities to measure bone density and body fat, and offices for biostatisticians and other staff.

Other VA sites hosting GCRCs include Little Rock, San Antonio, Miami and San Diego. ■

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