



Gulf War Review

New VA Study Supports Gulf War Service-ALS Link

A recent scientific study supports a 22-month policy by the Department of Veterans Affairs (VA) to recognize amyotrophic lateral sclerosis (ALS) among veterans of the Gulf War as a service-connected illness.

“Based upon preliminary research available in December 2001, I felt it was appropriate for us to act swiftly,” said Secretary of Veterans Affairs Anthony J. Principi. “I’m gratified that the final study supports that decision.” ALS, or Lou Gehrig’s disease, kills cells in the brain and spinal cord that control muscle movement, resulting in gradual wasting of the muscles. Fatal in most cases, the disease usually strikes people between ages 40 and 70 years of age. The cause of the disease is unknown.

The recent study found that veterans who were deployed to the combat theater during the Gulf War were nearly twice as likely to develop the disease as veterans not deployed to the Gulf. Forty cases were identified among Gulf War veterans. Based on comparison to non-deployed Gulf War era veterans, 33 cases were expected in this group. Therefore, seven additional cases were found among approximately 700,000 Gulf War veterans. The incidence of ALS was especially high among deployed Air Force personnel, who were 2.7 times more likely to develop ALS than non-deployed Air Force personnel.

“Earlier research did not provide a definitive answer to this issue,” said lead author Ronnie D. Horner, Ph.D. Horner was with VA’s Epidemiologic Research and Information Center in Durham, NC, when the research was conducted, and is now with the National Institute of Neurological Disorders and Stroke of the National Institute of Health. “We now have compelling evidence that service in the Gulf is associated with the occurrence of ALS among veterans of the ’90-’91 Gulf War.” The study, published in the September 23, 2003, issue of the scientific journal *Neurology* and funded by VA and the Department of Defense (DoD), does not identify a cause for the disease or the increased occurrence in this group of veterans. *(Continued on page 2)*

Exercise/Behavioral Therapy Helps Gulf War Veterans

A Department of Veterans Affairs-sponsored study to determine if aerobic activity and chronic behavior therapy (CBT) could improve the symptoms of Gulf War veterans found that modest relief for some of the symptoms in physical and mental health functions, but no improvements in pain symptoms. CBT is a widely used technique for bringing some relief to patients with otherwise difficult to treat symptoms.

Researchers from the Boston VA Medical Center, the University of Michigan, and the Walter Reed Army Medical Center led the study, a randomized trial conducted at 18 VA medical centers and two military hospitals from April 1999 to September 2001.

The randomized study included 1,092 patients who suffered from at least two chronic symptoms present among many Gulf War veterans: fatigue that limits *(Continued on page 2)*

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New VA Study Supports Gulf War Service-ALS Link *(Continued from page 1)*

The ALS Association and researchers from the Centers for Disease Control and Prevention advised the study leaders. Numerous medical, academic, veterans and voluntary health organizations provided assistance in conducting the study.

Another recent study by Dr. Robert W. Haley of the University of Texas Southwestern Medical Center at Dallas also supports VA's decision to officially recognize ALS as a service-connected illness for VA benefits.

VA's National ALS Registry

Earlier this year, VA established a national ALS registry to identify veterans with the disease -- regardless of when they served -- and track their health status. Veterans with ALS who enroll will complete an initial telephone interview covering their health and military service and will be interviewed twice yearly thereafter.

For more information about VA's ALS Registry, based at the Durham VA Medical Center, call **1-877-DIAL-ALS (1-877-342-5257)** or email. ALS@med.va.gov

It is important to keep in mind that ALS is a very rare disease, and that 40 cases diagnosed among the nearly 700,000 veterans who served in the theater of operations in 1990-91 suggests that veterans are still very unlikely to get this fatal disease.

Exercise/Behavioral Therapy Helps Gulf War Veterans *(Continued from page 1)*

usual activity, musculoskeletal pain, and/or cognitive symptoms such as memory loss or concentration difficulties.

The study found that CBT, whether or not it was combined with aerobic activity, led to significant improvements in physical functioning after 12 months. Among the patients receiving CBT, there was an 18.3% increase versus the patients not receiving CBT who only improved 11.6%.

CBT also helped improve mental health functioning and cognitive symptoms regardless of aerobic activity. Aerobic activity, with or without CBT, also led to improvements in mental health functioning, cognitive symptoms, fatigue and distress.

However, neither improved any pain symptoms.

Drawbacks of the study included noncompliant patients (patients dropping out of the study), including an average of only 50% attendance of the 12 weekly therapy sessions. Patients who attended more than eight of 12 weekly sessions reported significant improvement in physical functioning than those who attended fewer sessions.

The study, "Cognitive Behavior Therapy and Aerobic Exercise for Gulf War Veterans' Illnesses: A Randomized Control Trial," was published in the March 19, 2003, issue of the *Journal of the American Medical Association*.

The above article was drafted by Julissa Cruz, a senior majoring in journalism at the University of Illinois at Urbana-Champaign. Julie spent 10 weeks in VA's Environmental Agents Service as a summer intern through the Hispanic Association of Colleges and Universities (HACU) National Internship Program.

Studies Confirm Poorer Cognitive Performance in Gulf War Veterans

Veterans deployed to the Gulf War in 1990 and 1991 scored worse overall on neuropsychological tests compared to non-deployed veterans in a series of studies conducted by researchers at the Department of Veterans Affairs (VA) Environmental Hazards Center. The Environmental Hazards Center is part of the VA Boston Healthcare system. The five studies appear in the June 2003 issue of the *Journal of Psychopathology and Behavioral Assessment*.

In one study, Gulf War-deployed veterans performed significantly worse than their non-deployed cohorts on tests of attention, visuospatial skills, visual memory, and mood. Among the deployed veterans, those who reported having taken pyridostigmine bromide -- a pill given to about 250,000 Gulf War personnel to protect against possible attack with nerve gas -- performed worse than those who reported not taking the pill.

Past research on Gulf War veterans has shown that they are an increased risk for a vague cluster of symptoms, sometimes called Gulf War illness, involving chronic fatigue, musculoskeletal problems, asthma, post-traumatic stress disorder, depression, memory loss, poor concentration, and other health problems. These problems are also diagnosed in non-Gulf War veterans, although usually at lower rates. There is still no definitive answer regarding the cause of these various symptoms. Theories point to stress and other psychological factors, exposure to chemical

or infectious agents, or other environmental toxins, or side effects of anti-nerve agent.

Another of the five studies showed that symptoms of post-traumatic stress disorder were more prevalent in Gulf-deployed veterans, and that these symptoms were associated with poorer neuropsychological performance.

According to Roberta F. White, Ph.D., collaborator on four of the five articles and author of the fifth – a review of existing research – there appears to be multiple causes of Gulf War veterans’ illnesses. She commented, “The neuropsychological and health symptom sequelae of Gulf War zone service are multi-determined and cannot easily be explained on the basis of simplistic models of causation.” She added, “Psychological, historical, and exposure parameters must be considered in the scientific evaluation of this problem.”

Perlin Testifies on Pre- and Post-Deployment Health Issues

On July 9, 2003, Jonathan B. Perlin, M.D., Ph.D., Deputy Under Secretary for Health, Department of Veterans Affairs, testified on Pre- and Post-Deployment Health Issues before the House Committee on Veterans’ Affairs Subcommittee on Oversight and Investigations. Here is his prepared statement.

Because over 200,000 U.S. troops have been engaged in Operation Iraqi Freedom, I am grateful for the opportunity to emphasize that VA is prepared to provide high quality health care and disability assistance to Iraqi Freedom veterans. Since the Gulf War in 1991, VA has developed and implemented improved policies and programs to care for our Nation’s newest war veterans. As we have all witnessed over the last couple of months, this conflict is not over, and our men and women in uniform remain in harms way and deserve our best efforts.

Health Care, Surveillance, Education, and Outreach

Health Care Following Combat

It is critical to provide high-quality health care after every war. Congress understands this and under 38 U.S.C. § 1710(e)(1)(D), added by Public Law 105-368, VA was authorized to provide health care for a 2-year period to veterans who serve on active duty in a theater of combat operations during a period of war after the Gulf War, or in combat against a hostile force during a period of hostilities after November 1, 1998. Consequently, combat veterans, like those now serving in Iraq, have a 2-year period of access to free VA

health care, unless there is sufficient medical evidence to conclude that the illness is not attributable to that service.

To date, 22 combat veterans have been transferred to VA from DoD for specialized, long-term health care and rehabilitation. These patients have had spinal cord injuries, gunshot and grenade wounds, and other combat trauma. There have been relatively few veterans of Operation Iraqi Freedom who have otherwise presented for care at a VA medical center because most combat troops are still serving in Iraq or remain on active duty. The Iraqi war veterans presenting to our clinics have had a varied range of health problems. No illness due to chemical or biological agents have been reported.

Assessment of Difficult-to-Diagnose Illnesses

The majority of veterans returning from combat and peacekeeping missions are able to make the transition to civilian life with few problems. Most who come to for care at a VA medical center because most combat troops are still serving in Iraq or remain on active duty. The Iraqi war veterans presenting to our clinics have had a varied range of health problems. No illnesses due to chemical or biological agents have been reported.

Assessment of Health Care Needs

In addition to providing high-quality health care for veterans, VA now has the capability to collect and analyze comprehensive health information with its computerized outpatient and inpatient medical records. The capability to assess the health status of veterans has been greatly improved since the Gulf War. Standard health care databases help VA evaluate specific health questions. Importantly, VA clinicians are able to review veterans’ prior treatment in VA when the veterans obtain care from the Department. This capability will support broad, long-term, and comprehensive assessment of health status because many veterans return frequently for VA health care and are often seen in different clinics, and may be evaluated in different parts of the country for specialized health care needs.

VA is working with DoD to obtain a roster of recent combat veterans to facilitate analysis of computerized health records. Furthermore, veterans of Operation Iraqi Freedom are eligible for evaluation in the Gulf War clinical registry. Every Iraqi Freedom veteran is being offered an opportunity to participate in this registry, which provides a thorough clinical evaluation and documentation of symptoms and potential exposures.

Supplementary Clinical Programs

VA is developing a new clinical reminder that will pop up on the computer screens of VA health care providers when they encounter a new patient who may be a veteran of the war in Iraq or Afghanistan. This clinical reminder will ensure that health care providers evaluate veterans for deployment-related medical and psychological risks. It will also provide Internet links with relevant clinical practice guidelines and exposure health risk information.

In addition, the VA Depleted Uranium Followup Program at the Baltimore VA Medical Center is coordinating screening of the urine of veterans who may have been exposed to depleted uranium during Operation Iraqi Freedom. The service is being provided to both VA patients and to the Defense Department for active duty troops. The results of this testing are provided directly to the veteran and their VA or DoD physician.

Ensuring High Quality Post-Deployment Health Care

Specialized health care during the post-deployment period can help prevent long-term health problems. Therefore, VA and DoD developed evidence-based clinical guidance for treating veterans following deployment. Clinical Practice Guidelines (CPG's), which are based on the best scientifically supported practices, give health care providers the structure, clinical tools, and educational resources they need to diagnose and manage patients with deployment-related health concerns. VA and DoD have developed two post-deployment CPG's: a general purpose Post-Deployment CPG and a CPG for unexplained fatigue and pain. Our goal is to make sure that all VA health care providers are well-informed about specific deployments and related health hazards. Information on these Clinical Practice Guidelines is available online at www.va.gov/environagents.

VA health care receive conventional diagnoses and return to civilian life, and a small percentage of them develop difficult-to-diagnose symptoms. Sustained clinical care and research is needed to understand post-deployment health problems. Consequently, VA has established two "War-Related Illness and Injury Study Centers" (WRIISC's), in East Orange, NJ, and Washington, DC, to provide specialized health care for veterans from all combat and peacekeeping missions who suffer difficult-to-diagnose but disabling illnesses.

VA's two WRIISC's focus on determining the causes and most effective treatments for chronic symptoms,

which are problems following all wars. Health care at the centers is available to veterans of all eras -- including recent war veterans -- through referral by primary VA health care providers. The two centers also provide research into better treatments and diagnoses, develop educational materials, and develop specialized health care programs to meet veterans' unique needs. More information on the WRIISC's can be found at the VA website, www.va.gov/environagents.

Veterans Health Initiative

VA has built upon the lessons learned from our experiences with Gulf War and Vietnam veterans' programs to implement innovations and improved approaches to health care for all veterans. The Veterans Health Initiative (VHI) is a comprehensive program designed to improve recognition and treatment of deployment health effects, to better document veterans' military and exposure histories, and to establish a database for further study.

The education component of the VHI prepares VA health care providers to better serve their patients. VA has completed modules on spinal cord injury, cold injury; traumatic amputation, Agent Orange, the Gulf War, Post-Traumatic Stress Disorder, ex-POW health effects, blindness/visual impairment hearing loss, and, radiation. We are currently developing modules on infectious disease health risks in Southwest Asia, sexual trauma, traumatic brain injury, health effects from weapons of mass destruction, and occupational lung diseases. These important tools are integrated with other VA educational efforts to enable VA practitioners to more quickly and accurately arrive at a diagnosis and to provide more effective treatment. [The VHI Web site is www.va.gov/VHI.]

Enhanced Outreach

Veterans and their families, elected representatives, the media, and the nation all need timely and reliable information about wartime health risks. Consequently, VA has developed two brochures that addresses the main health concerns for military service in Afghanistan and Iraq. These brochures answer health-related questions that veterans, their families, and health care providers may have about these hazardous deployments. They also describe relevant medical care programs at VA. These two brochures can be accessed at:

- <http://www.va.gov/environagents/docs/afghanVet302.pdf> for the war in Afghanistan.

Another challenge for outreach is to address the specific concerns of veterans and their families over the potential long-term health impact of environmental exposures during deployment. These concerns are addressed through newsletters and fact sheets to veterans covering health and compensation issues, including environmental health risks; regular briefings of veterans service organizations; national meetings on health and research issues; media interviews; and, other educational material and Web sites with information, like www.va.gov/environagents.

Very importantly, VA recently published -- in collaboration with DoD -- a new brochure called "A Summary of VA Benefits for National Guard and Reservists Personnel." This brochure does an excellent job of summarizing the benefits available to this special population of veterans upon their return to civilian life. Too often Reservists and National Guard personnel have not received timely information about the benefits they have earned. A million copies of this brochure are being printed and distributed. This brochure is also available online at: <http://www.va.gov/environagents/docs/SVABENEFITS.pdf>.

Recruit Assessment Program (RAP)

VA is committed to the development of a lifelong health record for all military personnel and veterans. Therefore, VA is supportive of DoD's efforts to develop and implement the Recruit Assessment Program (RAP) that will collect comprehensive baseline health data from U.S. military recruits.

VA Vet Center Program

VA's Vet Centers, originally conceived to provide a wide variety of readjustment services to Vietnam veterans, have been invaluable in providing similar services to veterans from more recent combat and peacekeeping missions. More than 115,000 veterans of the Gulf War have made use of their services. The VA Vet Centers are now ready to help veterans of the current hostilities in Iraq.

Disability Compensation

To assist in disability evaluations, VA has actively worked with DoD to implement a standardized separation physical examination that thoroughly documents a veteran's health status at the time of separation from military service and that also meets the requirements of the physical examination needed by VA in connection with a veteran's claim for compensation benefits.

Additionally, VA has worked to provide fair compensation for Gulf War veterans with difficult-to-

diagnose illnesses. Under 38 U.S.C. § 1117 (as amended by Public Law 107-103), VA has authority to compensate Gulf War veterans for chronic disabilities resulting from an undiagnosed illness or certain medically unexplained chronic multi-symptom illnesses. Service members who serve in the Southwest Asia Theater of Operations during the current conflict with Iraq will also be eligible for compensation for disabilities resulting from undiagnosed illnesses under this authority.

Research

VA places a high priority on the development of improved methods of diagnosis, treatment, and prevention of illnesses related to deployments. In October 2002, VA's Office of Research and Development released a program announcement on deployment health research to expand VA's research portfolio on long-term health effects of hazardous deployments, such as the Gulf War, Bosnia/Kosovo, Afghanistan, and the current war in Iraq. Up to \$20 million will be spent on research to evaluate deployment health hazards. The results of this research program should provide useful guidance in improving the medical care of veterans who return from combat, and in improving preventive medicine efforts during future deployments.

Coordination with the Deployment of Defense

Deployment Health Work Group

One of the important lessons learned since the Gulf War was the need for continuous and formal intergovernmental coordination among VA, DoD, and the Department of Health and Human Services (HHS). As a result, the Deployment Health Work Group of the VA-DoD Health Executive Council was established in 2002 to ensure interagency coordination for all veteran and military deployment health issues. Governmental coordination will play a critical role in addressing health problems among veterans in future conflicts and peacekeeping missions. This work group has met repeatedly during the recent conflict in Iraq to coordinate government efforts, such as the development of a roster of deployed troops.

Transmission of Health Data between DoD and VA

VA and DoD are closely collaborating to develop the capability to share medical information electronically. Recently, the VA/DoD Joint Executive Council and Health Executive Council approved the adoption of the Joint VA/DoD Electronic Health Records Plan. This plan provides for the exchange of health data and development of a common health information

infrastructure supported by common data communications, security and software standards. This will allow interoperability of DoD and VA high performance health information systems. Since June 2002, VA providers have had online access to health information from DoD's Composite Health Care System for discharged and retired service members.

Deployment Health

VA applauds the efforts of DoD to prevent health problems among deployed troops and to provide immediate care for combat casualties. DoD has made substantial progress in lowering morbidity and mortality rates on the battlefield. Nevertheless, we have to focus greater attention on the long-term health problems of veterans that occur after every war. The trauma of warfare has lasting effects. The physical and psychological wounds of war heal slowly, and toxic exposures on the battlefield may have enduring health consequences long after the actual war has ended.

The key to addressing the long-term needs of veterans is improved medical recordkeeping and environmental surveillance. VA therefore is actively engaged with DoD in obtaining as much deployment health and exposure information as possible, including data on troop locations and data collected as part of pre- and post-deployment health screening.

Summary

A veteran separating from military service and seeking assistance today from VA will receive improved health care and disability assistance. VA has successfully developed new programs and adapted many existing programs for the benefit of combat veterans. VA also has significant experience with the special provisions in law authorizing disability compensation for war veterans with unexplained symptoms. In collaboration with other Federal agencies, VA has initiated new programs for developing and coordinating Federal research on veterans' health questions. The Department of Veterans Affairs is committed to helping ensure the health of service members both during deployment and after they leave military service.

GAO Questions DoD Plume Modeling

The General Accounting Office (GAO) concluded in testimony before Congress that the Department of Defense (DoD)-created plume models were not definitive in determining who was exposed to low levels of chemical warfare agents accidentally released following the demolition of Iraqi weapons at Khamisiyah, Iraq, in March 1991, after the Gulf War ceasefire.

Keith Rhodes, GAO's Chief Technologist at the Center for Technology and Engineering, Applied Research and Methods, offered this assessment, preliminary findings, during testimony presented at a hearing entitled "Following Toxic Clouds: Science and Assumptions in Plume Modeling," before the House Government Reform Subcommittee on National Security, Emerging Threats, and International Relations on June 2, 2003.

When the issue of possible exposure of U.S. military personnel was raised in 1993, DoD and the Central Intelligence Agency (CIA) concluded that no U.S. troops were exposed to these agents because (1) there were no forward-deployed chemical warfare agents, and (2) plumes-clouds of chemical warfare agents from the bombing could not have reached these troops.

In 1996, when it became known that in March 1991, after the ceasefire, U.S. troops destroyed a stockpile of chemical munitions at the Khamisiyah storage site in southeastern Iraq, that position changed. Consequently, DoD and the CIA made several modeling efforts to estimate the number of troops that might have been potentially exposed to low-level chemical warfare agents.

Since the actual data, such as the quantity and purity (concentration) of the agents, and meteorological conditions (including wind and weather patterns) were not available, DoD and CIA conducted field testing and modeling of bombing sites in 1996 and 1997 to determine the size and path of the plume, as well as the number of U.S. troops exposed to the plume.

DoD also asked the Department of Energy's Lawrence Livermore National Laboratory to conduct modeling. In 1997, DoD and CIA also combined a number of their own modeling efforts into a composite and conducted additional plume modeling. Subsequently, in 2000 the modeling of Khamisiyah was revised.

Plume models serve as a basis for estimating the exposure after chemical warfare agents were released into the environment. In making this model, mathematical equations were used to predict how much and in what direction the plume traveled. The GAO concluded that because the DoD did not have accurate information about the source of chemical warfare agents nor weather conditions, the plume model could not accurately predict where the chemical plume was. Because the DoD did not have the appropriate meteorological conditions and source term information, the GAO felt the DoD's results should not determine how much troops were exposed to during the Gulf War.

The GAO also felt that the models were not fully developed and showed certain biases that led to particular results. According to the GAO testimony, there were also certain situations that were excluded from the model, including but not limited to, plume height and exposure duration. For example, using different assumptions, the exposure footprints might have been larger and covered more areas where troops were stationed. However, it is unlikely that more models could be more helpful because of limited information.

Because of these flaws, the GAO felt that the plume model was unrealistic and inappropriate. Although there were some uncertainties that arose from the model created by the DoD and the CIA, the results were still used to determine whether or not soldiers were exposed to chemical agents. The GAO claimed that the DoD model should not be considered valid because of the various weaknesses.

GAO's full testimony is available at www.gao.gov/cgi-bin/getrpt?GAO-03-833T. For further information about the testimony, contact Keith Rhodes at rhodesk@gao.gov.

This article was drafted by Julissa Cruz, a senior majoring in journalism at the University of Illinois at Urbana-Champaign. Julie served in VA's Environmental Agents Service as a summer intern through the HACU National Internship Program.

Research Advisory Committee Continue to Meet Regularly

On June 16-17, 2003, and October 27-28, 2003, the Research Advisory Committee on Gulf War Veterans' Illnesses met in Washington, DC, to hear reports concerning completed and ongoing research initiatives and discuss future research efforts.

At the June meeting, the Committee received reports from Antonio Sastre, Ph.D., Midwest Research Institute, Kansas City, MO; Roberta White, Ph.D., Boston Environmental Hazards Center, Boston, VA Healthcare System Medical Center, Boston, MA; John Vogel, Ph.D, Lawrence Livermore National Laboratories, Lawrence, CA; Rogene Henderson, Ph.D., Lovelace Respiratory Research Institute, Albuquerque, NM; Nelda Wray, M.D., Chief Research and Development Officer, Department of Veterans Affairs; and Jennifer Vasterling, Ph.D., VA Medical Center, New Orleans, LA.

In the October meeting, the Committee continued to receive reports from scientists at VA, Department of Defense, and non-governmental researchers regarding

birth defects, neurotoxins, ALS (Lou Gehrig's Disease), anthrax, and other matters. During the first day of this meeting, VA researcher Han Kang presented information from the VA's National Health Survey of Gulf War Veterans and Their Families that shows an association between the children's birth defects and their parents' military service in the Gulf War. While the Associated Press and other news media entities reported the finding, it has not yet been peer-reviewed or published in a scientific journal, steps required to gain acceptance in the scientific community. (Occasionally, scientific papers undergo extensive changes during this process as methodologies are carefully analyzed, assumptions challenged, and conclusions modified.)

The Committee, authorized by Congress in 1998, is required to make recommendations to the Secretary of Veterans Affairs on research relating to the health consequences of military service in the Southwest Asia theater of operations during the Gulf War.

Committee meetings are open to the public and include time reserved for public comments. The Committee welcomes and solicits information concerning medical research regarding Gulf War veterans' illnesses from physicians, scientists, veterans, members of the general public, and other interested parties.

Mr. James H. Binns, Jr., former Chairman, Parallel Design, Inc., Tempe, AZ, and former Principal Deputy Assistant Secretary of Defense, chairs the 11-member Committee.

These were the fifth and sixth meetings since Secretary of Veterans Affairs Anthony J. Principi activated the Committee early last year. Earlier meetings were held in April, June, and October 2002, and February 2003. Secretary Principi regularly attended part of the meetings.

The Committee Web site is www.va.gov/rac-gwvi. The e-mail address is RAC GWVI@vapop.ucsd.edu. The mailing address is RAC-GWVI, 3366 N. Torrey Pines Court, Suite 250, La Jolla, CA 92037. The telephone number is 858-453-1058. The fax number is 858-453-1076.

NAS/IOM Gulf War Ongoing Health and Environmental Exposure Assessments

Public Laws 105-277 and 105-358 directed VA to seek to enter into a contract with the National Academy of Sciences (NAS) for an independent review of the medical/scientific information regarding the
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About the Review

The “Gulf War Review” is prepared by the VA’s Environmental Agents Service (EAS). The “Review” is published to provide information about the concerns of Gulf War veterans, their families, and others interested in possible long-term health consequences of military service in the Gulf War. The “Review” describes actions by VA and others to respond to these concerns. For past and current issues of the “Review” and additional information, see our Web site at www.va.gov/gulfwar.

The most recent issues of the newsletter are dated October 2002 and July 2003. Additional issues will be prepared when warranted by significant developments. EAS anticipates publication of the “Review” about three times annually. Four were issued in Calendar Year 2001, and the three were released in 2002. This issue was completed in late October 2003 and does not include developments that occurred after that time.

Comments or questions concerning the content of the “Review” are encouraged. Suggestions and ideas for future issues of the newsletter should be sent to the Gulf War Review, c/o Donald J. Rosenblum, Deputy Director, Environmental Agents Service (131), VA Central Office, 810 Vermont Avenue, N.W., Washington, DC 20420. Please do not send comments or questions to the Austin Automation Center. Officials there routinely send the questions/comments to the Environmental Agents Service in Washington, DC. Writing to Austin will unnecessarily delay a response.

Requests for additional copies of this and/or future issues should also be sent to Mr. Rosenblum. A limited supply of the prior issues is available. Please specify the quantity and issue date requested.

Questions about the Gulf War Registry examination should be directed to the environmental health coordinator (formerly known as the Registry Coordinator) or environmental health clinician (formerly known as the Registry Physician) at the nearest VA medical facility. The telephone number can be found in the local telephone directory under the “U.S. Government” listings. Assistance is also available from the toll-free VA Gulf War Helpline: **1-800-749-8387**.

VA benefit offices also have a great deal of information about VA benefit programs. The national toll-free telephone number is **1-800-827-1000**.

VA Publishes Brochure for Operation Iraqi Freedom Veterans and Their Families

In May 2003, the Department of Veterans Affairs (VA) published a six page brochure, entitled “**IRAQI FREEDOM VETERANS – Information for Veterans who Served in Southwest Asia in 2003**—Health Care and Assistance for U.S. Veterans of Operation Iraqi Freedom.

This 8 ½ x 11 inch brochure focuses on the major health concerns related to military service during 2003 in Iraq, Kuwait, and surrounding areas, and answers questions that veterans, their families, and health care providers may have about this deployment. It also describes medical care programs that VA has developed for veterans returning from combat or peacekeeping missions, and how to access these programs.

The publication provides information about Iraq, and about the 1990-91 War and its aftermath. It describes VA's program to respond to the needs of the veterans of the 1990-91 conflict, including medical treatment, scientific research, and disability compensation. It also describes the health risk to U.S. service members serving in Iraq during 2003, including environmental health hazards, infectious diseases, preventive measures, pesticide exposure, and deployment stress. The brochure also discusses deployment-related health effects.

The publication provides a great deal of information regarding health care resources for returning veterans, including the 2-year special eligibility after leaving military service for VA hospital care, medical services, and nursing home care for any illness. It describes VA’s War Related Illness and Injury Study Centers, programs administered by VA’s Vet Centers, VA’s Gulf War Web site, and Clinical Practice Guidelines for post-deployment health, jointly produced by VA and the Department of Defense. The brochure also identifies additional information resources.

The publication can be found on VA web site www.va.gov/gulfwar. Copies were also distributed to all VA medical centers in the Spring 2003. The brochure is also known as Information Bulletin 10-166.

Address Changes and Duplicates

If this newsletter has your old address, please use this form to update our mailing list. Send the completed form below to the **Gulf War Review, Austin Automation Center (200/397A), 1615 Woodward Street, Austin, TX 78772-0001**. If you have access to the Gulf War Review via the VA Web site www.va.gov/gulfwar and wish to discontinue receiving a copy by regular postal mail, please indicate this on the form. If you are receiving more than one copy of the newsletter, please let us know. Thank you for providing your name, address, and social security number; they are important to helping us keep our mailing list accurate.

Check or circle the language that describes your situation.

My address has changed, and I would like to continue to receive the newsletter.

I am receiving more than one copy, but I only want to get a single copy.

I don't need to get the newsletter by mail as I can read it at www.va.gov/gulfwar.

Other (explain) _____

Please print your:

First Name _____

Middle _____

Last _____

SSN: _____

New Street/RFD/Military Unit:

APO/FPO: ____ (Indicate which if applicable)

City: _____

Alpha State/or APO/FPO Code: ____

ZIP Code: _____

Gulf War Health Registry Examination Statistics

Here are some figures, as of the end of September 2003, regarding the VA's Gulf War Registry Health Examination Program that started in 1992.

Cumulative (1992-September 2003)

Total number of Gulf War veterans who have completed examinations since the program began – **86,489**

Total number of veterans tested for exposure to depleted uranium – **262**

Total number of dependents examination – **1,442**
(Spouses **586**, Children **856**)

Most Recent Month

Gulf War registry examinations -- **216**

NAS/IOM Gulf War Ongoing Health and Environmental Exposure Assessments

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relationship between various potentially hazardous exposures experienced by Gulf War veterans and health problems in these veterans.

The institute of Medicine (IOM), a major component of the NAS, has issued two Gulf War health reports to date. An additional two reports are in progress and IOM officials are planning further reports. The reports can be seen at www.nap.edu.

The completed and ongoing reports are listed below.

- September 2000 - Gulf War and Health, Volume 1 : Depleted Uranium, Pyridostigmine Bromide, Sarin, Vaccines
- February 2003 - Gulf War and Health, Volume 2 : Insecticides and Solvents
- December 2003 - (anticipated date), -- Sarin Update (not exact date)
- August 2004 - (anticipated date) -- Gulf War and Health, Volume 3 : Oil Wells Fires, Jet Fuels Fuels, Tent Heater Fumes, Environmental Pollutants and Particulates (not exact title)

Q's & A's – New Information Regarding Birth Defects

The “Review” occasionally includes a questions-and-answers feature in which VA officials respond to inquiries from readers regarding the Gulf War experience, problems encountered by Gulf War veterans and their families, and VA and other Government programs designed to help veterans.

A recent inquiry from CFS of Mebane, NC, asks about the possible relationship between military service in the Gulf War and birth defects in their children”

It is not clear whether Gulf War military service and birth defects are linked. But several studies are addressing this concern. Dr. Mark A. Brown, Director, Environmental Agents Service, responds to this inquiry:

A great deal of information is now known about this matter, including a recent scientific publication on birth defects among Gulf War veterans entitled “Prevalence of Birth Defects Among Infants of Gulf War Veterans in Arkansas, Arizona, California, Georgia, Hawaii, and Iowa, 1989–1993,” Araneta et al., *Birth Defects Research (Part A)* 67:246–260, 2003. The study was conducted at the Naval Health Research Center in San Diego, CA, and was funded by the U.S. military. It reported greater rates of five birth defects out of the 48 studied defects among infants of male and female Gulf War veterans, including certain heart and kidney defects. That study also reported greater rates of a birth defect in which the urethra terminates in an abnormal position in the penis, but only among infants conceived by female Gulf War veterans. However, the overall rate of birth defects was not higher among Gulf War veterans.

The Navy researchers acknowledged in their publication certain limitations of their study, including an inability to determine if the excess birth defects were caused by inherited or environmental factors, or were due to chance from various causes.

Also, several previous similar large studies have shown no statistically significant increase in birth defects among children born to Gulf War veterans.

The DoD-funded, Navy study does not provide solid proof that children of Gulf War veterans are at higher risk of birth defects because the results could easily have resulted from chance alone.

However, the findings of this study may become important if corroborated by a soon-to-be completed VA study.* VHA’s Environmental Epidemiology Service is currently validating the findings from the VA National Survey of Gulf War veterans using birth records. The VA study should be completed later this year.

Also, research is being conducted in Great Britain to assess the risk of birth defects in their population of Gulf War veterans’ offspring; the results of this study should be published later in 2003. We are hopeful that ongoing research will provide firm answers to the questions raised.

The possibility of an increased risk of birth defects is a difficult and emotional issue for military veterans because the consequences of a birth defect can be so terrible. The Department of Veterans Affairs recognizes the importance of the new Navy study of birth defects, and that it addresses a concern that many combat veterans have expressed. While it is not a definitive study, it raises serious questions that must and will be addressed by research.

At present, the Department of Veterans Affairs does not have the authority to provide medical treatment to the children of Gulf War veterans. In those cases where VA provides treatment, for example to children with spina bifida born to Vietnam veterans, it required special legislative authority from Congress.

Questions on Gulf War health issue should be sent to Mr. Donald J. Rosenblum, Deputy Director, Environmental Agents Service (131), ATTN GWR – Q’s and A’s, 810 Vermont Avenue, N.W., Washington, DC 20420.

*Note: Dr. Brown's remarks pre-dated Dr. Han Kang’s findings discussed in the article on the Research Advisory Committee. Preliminary results, announced by Dr. Kang, found that male Gulf War veterans reported having infants with likely birth defects at twice the rate of non-veterans. Furthermore, female Gulf War veterans were almost three times more likely to report children with birth defects than their non-Gulf counterparts. The numbers changed somewhat with medical records verification. However, Dr. Kang and his colleagues concluded that the risk of birth defects in children of deployed male veterans still was about 2.2 times that of non-deployed veterans. His research is currently undergoing peer review.

Where to Get Help

Active duty military personnel with questions or concerns about their service in the Persian Gulf region - contact your commanding officer or call the Department of Defense (DoD) Gulf War Veterans' Hotline (**1-800-796-9699**) for an examination.

Gulf War veterans with concerns about their **health** - contact the nearest VA medical center. The telephone number can be found in the local telephone directory under Department of Veterans Affairs in the "U.S. Government" listings. A Gulf War Registry examination will be offered. Treatment will be provided to eligible veterans. The VA Gulf War Information Helpline can also provide the latest information and assistance. The toll-free telephone number is 1-800-PGW-VETS (**1-800-749-8387**).

Gulf War veterans in need of **marital/family counseling** - contact the nearest VA medical center or VA vet center. For additional information, call the Gulf War Information Helpline at **1-800-PGW-VETS (1-800-749-8387)**.

Gulf War veterans seeking **disability compensation** for illnesses incurred in or aggravated by military service - contact a Veterans Benefits Counselor at the nearest VA regional office or health care facility at **1-800-827-1000**, or call the VA Gulf War Information Helpline at **1-800-PGW-VETS (1-800-749-8387)**.

Gulf War veterans seeking participation for their **spouses or children** in the VA-funded health examination program for spouses and children - call the VA Gulf War Information Helpline at **1-800-PGW-VETS (1-800-749-8387)**. Veterans interested in the alternative self-funded examination for spouses or children - contact the Gulf War Registry Coordinator at the nearest VA medical center for forms and information.

Gulf War veterans interested in learning about the wide range of **benefit programs** administered by VA - contact a Veterans Benefits Counselor at the nearest VA regional office or health care facility at **1-800-827-1000**, or call the VA Gulf War Information Helpline at **1-800-PGW-VETS (1-800-749-8387)**.

DoD has changed its "**Incidents Hotline**" to the "**Direct Veterans Hotline**" to more accurately reflect the work done by the Hotline's contact managers. The new toll-free number is **1-800-497-6261**.

For additional information about VA's program initiatives, see VA's Gulf War **veterans' illnesses** home page at www.va.gov/gulfwar.

Gulf War veterans who **encounter difficulties** at a VA medical facility can contact the "**patient advocate**" at that facility for assistance in resolving the problem. The medical center telephone operator should have the telephone number.

Representatives of **veterans service organizations**, including the American Legion (**1-800-433-3318**), Veterans of Foreign Wars of the United States (**1-800-VFW-1899**), Disabled American Veterans (**1-877-426-2838**), etc., have been very helpful to Gulf War veterans, especially veterans who are seeking disability compensation. (These organizations are cited as examples. There are many other excellent organizations. VA does not endorse or recommend any one group over another.)

County Veterans Service Officers also have been of great help to many military veterans, including those who served in the Gulf War, who are seeking benefits they earned through their service to the Nation.

For additional **Federal benefit** information, see VA's *Federal Benefits for Veterans and Dependents* booklet. It is updated annually to reflect changes in law and policies. It is available for purchase from the U.S. Government Printing Office, Superintendent of Documents, Washington, DC 20402, Web site: bookstore.gpo.gov. VA's World Wide Web pages are updated throughout the year to present the most current information. The VA home page (www.va.gov) contains links to selections on compensation and pension benefits, health care benefits and services, burial and memorial benefits, etc.



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