



Gulf War Review

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Information for Veterans Who Served in Desert Shield/Storm

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\$7.3 Million Awarded for Gulf War Health Research Studies

On June 20, 1996, the Departments of Defense and Veterans Affairs announced the award of \$7.3 million for 12 research grants to Federal agencies, academic institutions, and other non-Federal agencies to study possible causes and treatments of Gulf War veterans' illnesses. Through these grants the Departments hope to gain a greater understanding of the illnesses reported by Gulf War veterans.

In May 1995, the Departments sought proposals from both non-Federal and government applicants, including universities, hospitals, and research institutions concerning: (1) epidemiological studies of health problems of Persian Gulf veterans related to their service in the Gulf War; (2) health effects of pyridostigmine used alone and in combination with other chemicals; and (3) clinical studies and other research on the causes, modes of transmission, and appropriate treatments for Gulf War-related illnesses. (Pyridostigmine is the medication taken by troops to help prevent the adverse effects of chemical warfare agents.)

After completion of an exhaustive, independent peer-review, the Departments selected 12 from the 111 scientific proposals that were submitted. Final selections were made on the basis of scientific merit and program relevancy. The U.S. Army Medical Research and Materiel Command made the awards on behalf of the Departments of Defense, Veterans Affairs, and Health and Human Services. The 12 projects are described below.

Women's Health

The formal title is "Epidemiological Studies Persian Gulf War Illnesses, Persian Gulf Women's Health Linkage Study." This research, which is being conducted by the Klemm Analysis Group, Washington, DC, examines the effects of Gulf War service on military women's health. The studies are comparing the incidence, prevalence, general health outcomes, and risks of women deployed in the Gulf War theater of operations with Gulf War era women who were not deployed to the Gulf.

Stress

The title of this Georgetown University Medical Center, Washington, DC, project is "Dysregulation of the Stress Response in the Persian Gulf Syndrome." This study is attempting to show that abnormalities in some of the neurohormones important in human response to stress are at least partly responsible for some of the unexplained symptoms

suffered by some Gulf War veterans as well as symptoms in other conditions.

Neuropsychological Functioning

This project is entitled "Neuropsychological Functioning in Persian Gulf War Veterans." This research effort, being conducted at the Boston University Medical Campus, Boston, MA, is evaluating whether Gulf War veterans show cognitive impairments suggestive of central nervous system damage at a greater rate than veterans who were not deployed to the Gulf.

Pyridostigmine

This University of North Carolina, Chapel Hill, NC, project is entitled "Effects of Pyridostigmine in Flinders - Line Rats Differing in Cholinergic Sensitivity." This study is examining the possibility that some individuals reporting adverse reactions to pyridostigmine may have had predisposing genetic conditions that made them more sensitive to pyridostigmine and contributed to symptoms of multiple chemical sensitivity after exposure to pyridostigmine.

Diesel Fuel Emissions

This effort is entitled "Characterization of Emissions from Heaters Burning Leaded Diesel Fuel in Unvented Tents." It is being conducted by Lovelace Biomedical and Environmental Research Institute, Albuquerque, NM. This project is designed to provide detailed information on pollutants produced in unvented tents from heaters that burn leaded diesel fuels.

Birth Defects

The March of Dimes/California Birth Defects Monitoring Program, Sacramento, CA, is conducting this effort, entitled "Feasibility of Investigating Whether There is a Relationship Between Birth Defects and Service in the Gulf War." This research is attempting to determine if all children born to Gulf War veterans living in California can be identified and if congenital birth defects diagnosed during the first year of life can be identified as well.

Fatigue

This research, at the University of Texas Southwestern Medical Center at Dallas, TX, is entitled "Fatigue in Persian Gulf Syndrome - Physiologic Mechanisms." This project focuses on symptoms of abnormal fatigue in Gulf War veterans. The study is examining the possibility that



mechanisms used by muscle cells to use oxygen and produce energy for work may be impaired in patients suffering abnormal muscle fatigue and the inability to exercise.

Pyridostigmine, Permethrin and DEET

The title of this University of Florida, Gainesville, FL, study is "Neurobehavioral and Immunological Toxicity of Pyridostigmine, Permethrin and DEET in Males and Females." This multidisciplinary study using male and female rats is examining any neurobehavioral toxicity and immune response changes after exposure to various exposures (pyridostigmine, and pesticides permethrin and DEET) alone and in combinations. Human cells will also be studied for immune response as a result of exposures to these materials.

Leishmaniasis

The Infectious Disease Research Institute in Seattle, WA, is responsible for this research effort, entitled "Diagnostic Antigens of 'Leishmania tropica'." U.S. troops were exposed to a number of infectious diseases in the Persian Gulf theater. Most notable of these diseases is leishmaniasis because it is a cause of chronic disease and because leishmania parasites can be transmitted by blood transfusion.

Because leishmania infection was detected among some U.S. troops, the Centers for Disease Control and Prevention imposed a ban on blood donations by these troops. The ban was lifted in January 1993 because of the very small number of diagnosed leishmaniasis cases.

This study is attempting to develop a sensitive method to detect infection with Leishmania Tropica (one form of the parasite) or related species in military personnel.

Coalition Forces Project

The title of this project is "A Controlled Epidemiological and Clinical Study into the Effect of Gulf War Service on Servicemen and Women of the United Kingdom Armed Forces." The King's College School of Medicine and the Institute of Psychiatry in London is pursuing this effort. This research focuses on the prevalence of illnesses in members of the United Kingdom Armed Forces who were deployed to the Persian Gulf during the Gulf War, United Kingdom military members who were not deployed, and other members who served and are now in Bosnia.

Psychological/Neurobiological Consequences

The VA Connecticut Healthcare System, CT, is conducting this project, entitled "Psychological and Neurobiological Consequences of the Gulf War Experience." This research is following the course of symptoms of Post-Traumatic Stress Disorder (PTSD) in a population of Gulf War veterans.

Investigators hope that this study of how such symptoms, as well as memory function, change over time in veterans will lead to a better understanding of PTSD and the elements of risk that would cause and continue PTSD symptoms over the years.

Muscle Function

This University of Pennsylvania project is entitled "Evaluation of Muscle Function in Persian Gulf Veterans." This research is focusing on the causes of ongoing chronic fatigue and muscle weakness in Gulf War veterans with unexplained illnesses. The study is a comprehensive, multidisciplinary approach to evaluate abnormalities in skeletal muscle function in Gulf War veterans.

Other Completed and Ongoing Research Efforts

Section 722, Public Law 103-337, signed by President Clinton in October 1994, provides for this independent and competitively-bid, peer-reviewed research on the possible health consequences of service in Southwest Asia during the Persian Gulf War.

The 12 new research projects are in addition to the 69 distinct research projects on Persian Gulf veterans' illnesses sponsored by the Departments of Veterans Affairs, Defense, or Health and Human Services. Of these 69 projects, 51 are ongoing and 18 are complete. A project is considered complete when all data have been collected and analyzed. There is a delay between completion and publication of results to allow for adequate scientific peer-review.

VA alone is conducting or sponsoring 35 projects, of which 27 are ongoing and 8 are complete. Most of the large research projects and programs involve some participation of several departments.

U.S. Troops Destruction of Bunker Raises Questions About Chemical Exposure

On June 21, 1996, the Department of Defense (DOD) announced that shortly after the end of fighting in the Persian Gulf War, U.S. troops destroyed an Iraqi ammunition bunker that appears to have contained chemical weapons.

The troops, trained demolition experts accompanied by chemical weapons experts, were unaware at the time that the bunker contained rockets with chemical agents being present.

DoD spokesman Ken Bacon indicated that in late May 1996, the United Nations Special Commission (UNSCOM) found that one bunker, destroyed by U.S. troops in March 1991, in the Kamisiyah Storage Area in southern Iraq, contained rockets with chemical agents.

The Kamisiyah area, southeast of An Nasiriyah and northwest of Basrah, contained several different storage areas, including an open pit where chemical munitions were found. Iraq declared Kamisiyah a chemical weapons storage site shortly after the Gulf War, and UNSCOM first visited the site in October 1991, finding evidence of chemical weapons in the pit. Only recently, however, has UNSCOM reconfirmed that one bunker several miles away from the pit also had chemical weapons.

DoD investigators are intensely studying Iraq's chemical weapons programs and are trying to document, as precisely as possible, the actions of U.S. troops during and after the fighting. They are now able to confirm that U.S. troops destroyed the bunker in question in March 1991. DoD officials reported that information concerning this incident is still incomplete and that they have interviewed some of the U.S. troops who were present.

DoD officials indicated that current evidence suggests that Americans were not exposed to significant levels of chemical warfare agents during the demolition effort. DoD stated that chemical agent detectors were present and in use at the time of demolition, but they did not detect the presence of any agent.

DoD noted that while some veterans have expressed concern that they might have been exposed to chemical weapons during or after the Gulf War, DoD spokesman Bacon said that DoD has found no evidence that Iraq used chemical weapons during the War. He added that DoD has found no clinical evidence that U.S. troops were exposed to chemical weapons. DoD encourages Persian Gulf War participants who witnessed "incidents" that may help explain medical problems experienced by some veterans to call the toll-free incidents hotline: **1-800-472-6719**.

VA Treatment

VA is aware that some veterans are concerned that they were exposed to chemical warfare agents during their service in the Gulf. VA provides medical treatment to eligible Persian Gulf veterans based on the symptoms presented. Physicians often effectively treat patients' problems without definite information about the cause of such problems. Questions regarding eligibility are handled in the Medical Administration Service at each VA medical center. VA will support more extensive research efforts on the potential adverse health effects of low level chemical warfare exposures.

Presidential Advisory Committee Maintains Active Pace

The Presidential Advisory Committee on Gulf War Veterans' Illnesses is continuing to meet frequently at locations around the country to gather information about and hear testimony from those who served in Operations Desert Shield and Desert Storm.

(Lengthy front page articles about the Committee were included in the "Persian Gulf Review" issues dated August 1995, December 1995, and March 1996.)

The 12-member committee was established by President Clinton in May 26, 1995, to provide advice and recommendations regarding a wide range of concerns relating to Persian Gulf veterans. The Committee issued an interim report on February 14, 1996. On April 25, 1996, the Secretaries of Defense, Veterans Affairs, and Health and Human Services submitted to President Clinton a consolidated implementation plan for the recommendations in the interim

About the "Review"

The "Persian Gulf Review" is written by VA's Environmental Agents Service (EAS). The "Review" is published to provide information about the concerns of Persian Gulf veterans, their families, and others interested in possible long-term health consequences of military service in the Persian Gulf War. The "Review" describes actions by VA and others to respond to these concerns.

The most recent, prior to this, issue of the newsletter was printed in March 1996. Additional issues will be prepared when warranted by significant developments. EAS anticipates publication of the "Review" three or four times annually. Four issues were published in 1995 (January, April, August, and December). This issue was written in late July 1996 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 Donald J. Rosenblum, Deputy Director, Environmental Agents Service (131), VA Headquarters, 810 Vermont Avenue, NW, Washington, DC 20420.

Requests for additional copies of this and/or future issues should also be sent to Mr. Rosenblum. A limited supply of issues released in 1995 and 1996 is also available. Please specify the quantity and issue dated requested. VA facilities should order additional copies from the VA Forms Depot.

Questions about the Persian Gulf Registry examination should be directed to the Registry Coordinator or 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 Persian Gulf Helpline: **1-800-749-8397**.

report. The final Presidential Advisory Committee report should be released at the end of the year. The Committee members sometime meets in subcommittees or panels that focus on specific areas of concerns. In 1995, meetings were held as follows: August 14-15, Washington, DC; September 18, Charlotte, NC, Clinical Issues Panel; October 18-19, Arlington, VA; November 7-8, San Francisco, CA, Epidemiologic Research Panel; and December 4-5, San Diego, CA.

This year, the following meetings have been held: January 12, Kansas City, MO, Use of Investigational Drugs and Vaccine Panel; January 31, Washington, DC; February 27, San Antonio, TX, Clinical Syndromes Panel; March 26, Boston, MA; April 16, Atlanta, GA, Biological and Chemical Warfare Agents Panel; May 1-2, Washington, DC; June 17-18, Seattle, WA, Reproductive Health Panel; July 8-9, Chicago, IL; and July 23, Cincinnati, OH, Stress Panel. Future meetings will be held on August 6, Denver, CO, DoD Investigation Team/Risk Factors Panel; September 4-5, Washington, DC; October 9, Tampa, FL; and November 13-14, Washington, DC.

Anyone interested in providing input to the Committee or seeking additional information about the Committee can write to the Presidential Advisory Committee on Gulf War Veterans' Illnesses, 1411 K Street, NW, Suite 1000, Washington, DC 20005.

Persian Gulf Expert Scientific Committee Provides Advice to Secretary Brown

While a great deal of attention has been focused on the Presidential Advisory Committee, VA's own Persian Gulf advisory committee, formally known as the "Persian Gulf Expert Scientific Committee" has continued to meet and focus on VA's policies and programs to respond to the needs of Gulf War veterans.

The VA committee was chartered at the request of Secretary Brown on October 16, 1993, and held its initial meeting on February 22-23, 1994. This committee is the successor to the "blue ribbon" panel announced by Secretary Brown on March 30, 1993, which met on May 7, 1993.

(Articles regarding the "blue ribbon" panel and the committee were included in the "Persian Gulf Review" issues dated September 1993 and September 1994.)

Subsequent meetings of the Expert Scientific Committee were held on April 29, 1994, July 28-29, 1994, November 14-15, 1994, February 27-28, 1995, June 26-27, 1995, November 30-December 1, 1995, and June 3-4, 1996. The next meeting is scheduled for November 18-19, 1996. That meeting, like the previous sessions, will be formally announced in the **Federal Register** and will be open to the public. All meetings held to date have been in the Washington, DC metropolitan area.

The Expert Scientific Committee has made a wide range of recommendations to Secretary Brown, regarding research, clinical examinations, outreach, quality assurance, and related matters. VA has taken appropriate action on each of the recommendations.

Individuals seeking information about the Committee can contact the Executive Secretary: Robert E. Allen, Ph.D., Special Assistant, Office of Public Health and Environmental Hazards (13), VA Headquarters, 810 Vermont Avenue, NW, Washington, DC 20420.

VA Sponsors Updated Persian Gulf Registry Questionnaire; Chosen Urged to Participate

The Department of Veterans Affairs will soon begin mailing its revised Persian Gulf Registry Questionnaire to Persian Gulf veterans who participated in the original voluntary Registry medical examination.

New questions concerning potential exposures during Gulf War service, and reproductive health questions, have been added to the standard Registry examination protocol. Information gathered from the revised Persian Gulf Registry

Questionnaire will be added to the existing Registry database for use in developing clinical programs and determining areas where further study is needed.

The VA's Environmental Agents Service (EAS) is conducting the revised Persian Gulf Registry Questionnaire project. Frances M. Murphy, M.D., M.P.H., Director, EAS, strongly urges those Persian Gulf veterans receiving the questionnaire to fully participate. Dr. Murphy noted that full participation will allow VA to learn more about the health of veterans and their families.

VA to Establish Environmental Hazards Research Center on Reproductive and Developmental Outcomes

Many people, including veterans and their families, have expressed concern that some aspect of military service may have increased the likelihood of adverse reproductive health problems, including birth defects and various developmental abnormalities, in the children or grandchildren of certain veterans.

Concerns have been voiced by veterans who were exposed to ionizing radiation during nuclear weapons testing or during the occupation of Japan at the conclusion of World War II, by Vietnam veterans worried about the long-term health consequences of Agent Orange and other herbicides used in Vietnam, and by Persian Gulf War veterans with regard to a wide variety of potential environmental hazards encountered in the Southwest Asia theater of operations.

Intended to Fill Information Gap

Top VA officials recognize that definitive answers are not available to many of the questions raised about the possible untoward reproductive effects of exposure to various toxic substances and environmental hazards. VA has acted to fill this information gap. On May 24, 1996, VA Under Secretary for Health Kenneth W. Kizer, M.D., M.P.H., announced a formal solicitation for applicants to establish a research center for epidemiological, clinical, and basic science studies of environmental hazards and their effects on reproductive and developmental outcomes."

\$900,000 Available Over 3 Years

The VA Office of Research and Development will provide funds, for up to three years, for a single research center focused on the human reproductive and developmental effects of environmental and occupational exposures associated with military service. Research funding for the core and associated research projects will be available up to a maximum of \$300,000 per fiscal year, beginning in the first quarter of Fiscal Year 1997 (October 1996--December 1996). In addition, \$50,000 may be requested for equipment and start-up funds in the last quarter of Fiscal Year 1996.

Center Will Involve Non-VA Researchers Also

VA medical centers are invited to submit a full proposal for review. The deadline for receipt is August 15, 1996. It is expected and strongly encouraged that the proposed Center be formed as a consortium involving investigators from VA and other government and non-government agencies, such as universities, state agencies, and other Federal entities, such as the Department of Defense, the Department of Health and Human Services, and the Environmental Protection Agency.

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) Persian Gulf Veterans' Hotline (1-800-796-9699) for an examination.

Persian Gulf 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 Persian Gulf Registry examination will be offered. Treatment will be provided to eligible veterans. The VA Persian Gulf Information Helpline can also provide the latest information and assistance. The toll-free telephone number is **1-800-PGW-VETS (1-800-749-8387)**.

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

Persian Gulf 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 or call the VA Persian Gulf Information Helpline at **1-800-PGW-VETS (1-800-749-8387)**.

Persian Gulf 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, or call the VA Persian Gulf Information Helpline at **1-800-PGW-VETS (1-800-749-8387)**.

Individual with first-hand information about "incidents" that occurred in the Southwest Asia theater of operations during the Persian Gulf War that may be related to health problems experienced by individuals who served in the War - call the DoD "Incidents" Hotline at **1-800-472-6719**.

Note: Representatives of veterans service organizations, including the American Legion, Veterans of Foreign Wars of the United States, Disabled American Veterans, etc., may also be very helpful to Persian Gulf veterans.

Q's and A's

The "Persian Gulf Review" includes a questions-and-answers section in which VA officials respond to readers' inquiries about various concerns of Persian Gulf veterans and their families. Questions should be sent to Donald J. Rosenblum, Deputy Director, Environmental Agents Service (131), VA Headquarters, 810 Vermont Avenue, NW,

Washington, DC 20420. We cannot guarantee that all questions will be used in this column, but they will be considered.

Spouses/Children Funded Exam Program Ends September 30

On September 30, 1996, authority will expire for the special program to fund health examination for certain spouses and children of Persian Gulf Registry participants. The results of these examinations, which are conducted, under contract, by non-VA physicians in non-VA medical facilities are included in the Registry. As of mid-July, more than 600 individuals were participating in this effort.

To be eligible for participation, an individual must (1) be the spouse of a veteran who is (a) listed in the VA's Persian Gulf War Veterans Registry, and (b) suffering from an illness or disorder; (2) be suffering from, or may have suffered from an illness or disorder (including a birth defect, miscarriage, or stillbirth) which cannot be disassociated from the veteran's service in the Southwest Asia theater of operations; and (3) have granted VA permission to include in the Registry relevant medical data from the evaluation. Questions about this program should be directed to the Helpline **(1-800-PGW-VETS)**. Authority for the program was established by Public Law 103-446. Individuals interested in this program should call the helpline as soon as possible.

An alternative VA program exists for spouses and children of Persian Gulf veterans to enter their medical information into the Persian Gulf Registry. Eligible family members may have their private physicians complete a Registry code sheet containing the protocol examination information and submit it to VA for entry into the database. All expenses related to completion of the protocol and the code sheet are the responsibility of the veteran or the family members. Anyone seeking more information on this unfunded examination program for Persian Gulf veterans' spouses and children, should contact the Persian Gulf coordinator at the nearest VA medical center.

Access to Persian Gulf Information by Computer

The VA's Persian Gulf Veterans' Illnesses home page can be accessed directly at

"<http://www.va.gov/health.envIRON/PERGULF.HTM>" or through the VA's homepage at "<http://www.va.gov>" and then choosing the Special Program option.

Other related web links provided on the VA's Persian Gulf Veterans' Illnesses page include:

*Interim Report of Presidential Advisory Committee on Gulf War Veterans Illnesses

*Presidential Advisory Committee on Gulf War Veterans Illnesses

*DUD's Gulflink

*Veterans and Agent Orange: Update 1996

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