



IOM Releases Report on Gulf War Hazards; Others to be Covered in Future Reports

On September 7, 2000, the National Academy of Sciences' Institute of Medicine (IOM) released the results of a 27-month (June 12, 1998-August 31, 2000) independent and comprehensive review and analysis of scientific and medical literature on health problems associated with exposure experienced during the Gulf War. The Department of Veterans Affairs (VA) has regularly turned to the IOM as a prestigious independent scientific and medical organization for advice on similar veterans' health issues.

The 300+ page report presents a comprehensive assessment of the published, peer-reviewed scientific literature regarding adverse health effects related to selected environmental hazards to which Gulf War veterans may have been exposed. The report also identifies gaps in research and makes recommendations regarding areas in which research may improve our understanding of Gulf War veterans' illnesses.

In planning this project, the IOM Committee on Health Effects Associated with Exposures During the Gulf War contacted representatives of veterans organizations for advice in setting its priorities. The Committee followed the advice of these organizations to begin by analyzing the health effects of depleted uranium, the chemical warfare agent sarin, vaccinations against botulinum toxin and anthrax, and pyridostigmine bromide (PB).

Important Lesson

Harold C. Sox, Jr., M.D, Professor and Chair, Department of Medicine, Dartmouth-Hitchcock Medical Center, chaired the 18-member committee. According to Dr. Sox, "For this committee, one of the most important lessons of the Gulf War is the need for accurate recordkeeping of what happens to soldiers in war." Unfortunately, the lack of information about individual Gulf War veterans' exposure to the various

agents means that it is not possible to show that an individual soldier experienced a dose that is associated with an increased risk of disease.

The IOM Committee reached many specific conclusions regarding the relationship between these risk factors and illnesses experienced by some Gulf War veterans. The conclusions and recommendations are described below.

Based on how good the scientific evidence is, the IOM classified health effects into one of the following five categories: 1) Sufficient Evidence of a Causal Relationship, 2) Sufficient Evidence of an Association, 3) Limited/Suggestive Evidence of an Association, 4) Inadequate/Insufficient Evidence to Determine Whether an Association Does or Does Not Exist, and 5) Limited/Suggestive Evidence of No Association. (The IOM used similar categories in its evaluation of the health effects of Agent Orange exposure for Vietnam veterans.)

The categories are defined as follows:

- *Sufficient Evidence of a Causal Relationship.* Evidence is sufficient to conclude that a causal relationship exists between the exposure to a specific agent and a health outcome in humans. The evidence fulfills the criteria for sufficient evidence of an association (below) and satisfies several of the criteria used to assess causality: strength of association, dose-response relationship, consistency of association, temporal relationship, specificity of association, and biological plausibility.
- *Sufficient Evidence of an Association.* Evidence is sufficient to conclude that there is a positive association. That is, a positive association has been observed between an exposure to a specific agent and a health outcome in human studies in which chance, bias, and confounding could be ruled out with reasonable confidence.
- *Limited/Suggestive Evidence of an Association.* Evidence is suggestive of an association between a

specific agent and a health outcome in humans, but is limited because chance, bias, and confounding could not be ruled out with confidence.

- *Inadequate/Insufficient Evidence to Determine Whether an Association Does or Does Not Exist.*
The available studies are of insufficient quality, consistency, or statistical power to permit a conclusion regarding the presence or absence of an association between an exposure to a specific agent and the health outcomes in humans .
- *Limited/Suggestive Evidence of No Association.*
There are several adequate studies covering the full range of levels of exposure that humans are known to encounter, that are mutually consistent in not showing a positive association between exposure to a specific agent and a health outcome at any level of exposure. A conclusion of no association is inevitably limited to the conditions, levels of exposure, and length of observation covered by the available studies.

Conclusions

The IOM included only one exposure in category one (Sufficient Evidence of a Causal Relationship): Exposure to sarin and a dose-dependent acute cholinergic syndrome that is evident promptly (seconds to hours) after sarin and resolves in days to months.

There are three entries in category two (Sufficient Evidence of an Association): 1) PB and transient acute (that is, short-lasting, and immediately after exposure) cholinergic effects in doses normally used in treatment and for diagnostic purposes, 2) Anthrax vaccination and transient acute local and systemic effects, and 3) Botulinum toxoid vaccination and transient acute local and systemic effects.

In category three (Limited/Suggestive Evidence of an Association), the IOM placed one item: Exposure to sarin at doses sufficient to cause acute cholinergic signs and symptoms and subsequent long-term effects.

Half of the conclusions were in category four (Inadequate/Insufficient Evidence to Determine Whether an Association Does or Does Not Exist). These included: 1) Exposure to uranium and lung cancer at higher levels of cumulative exposure (greater than 200mSv or 25 cGy), 2) Exposure to uranium and lymphatic cancer; bone cancer; nervous system disease; nonmalignant respiratory disease; or other health outcomes (gastrointestinal disease, immune-mediated disease, effects on hematological parameters,

reproductive or development dysfunction, genotoxic effects, cardiovascular effects, hepatic disease, dermal effects, ocular effects, or musculoskeletal effects), 3) PB and long-term adverse health effects, 4) Exposure to sarin at low doses insufficient to cause acute cholinergic signs and symptoms and subsequent long-term adverse health effects, 5) Anthrax vaccination and long-term adverse health effects, 6) Botulinum toxoid vaccination and long-term adverse health effects, and 7) Multiple vaccinations and long-term adverse health effects.

In the final category (Limited/Suggestive Evidence of No Association), the IOM placed two items: 1) Exposure to uranium and lung cancer at cumulative internal dose levels lower than 200 mSv or 25 cGy, and 2) Exposure to uranium and clinically significant renal dysfunction.

Research Recommendations

The IOM committee developed the following recommendations for future research on the areas covered by the report. The report notes that “(t)hese recommendations highlight areas of scientific uncertainty and, if implemented, will help to resolve important questions about the effects of the Gulf War on the health of the veterans.”

Biological, Chemical, and Psychological Interactions

- Research on the interaction among the multiple agents and stressors to which military personnel were exposed as a result of the Gulf War

Depleted Uranium

- Continued follow-up of the Baltimore cohort of Gulf War veterans with DU exposure. Long-term studies of the health of other Gulf War veterans at high risk for DU exposure (e.g., cleanup or radiation control units)
- Continued follow-up of the cohorts of uranium processing workers
- Additional studies of the effects of DU in animals

PB

- Research on chemical interactions between PB and other agents such as stress, and certain insecticides

(Continued on page 3, 2nd column)

About the “Review”

The “Gulf War Review” is written by 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/About_VA/Orgs/VHA/VHAProg.htm.

The most recent, prior to this, issue of the newsletter is dated June 2000. Additional issues will be prepared when warranted by significant developments. EAS anticipates publication of the “Review” three or four times annually. This issue is the third for 2000. It was completed in early October 2000 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 Central Office, 810 Vermont Avenue, N.W., Washington, DC 20420.

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.

VA facilities should order additional copies from the VA Service and Distribution Center. Each station has a Publications Control Officer (PCO). VA facilities should place any orders through their PCO using the LOG system.

Questions about the 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 Gulf War Helpline: **1-800-749-8387**.

- Research on differences in genetic susceptibility that may contribute to increased risk of disease
- Epidemiologic studies on the possible long-term health effects of PB

Sarin

- Long-term follow-up of populations exposed to sarin in the Matsumoto and Tokyo terrorist attacks
- Studies in experimental animals to investigate the long-term effects of an acute, short-term exposure to sarin at doses that do not cause overt cholinergic effects and minimal acetylcholinesterase inhibition
- Research on genetic factors that may alter susceptibility to sarin toxicity

Vaccines

- Long-term systematic research to examine potential adverse effects of anthrax and botulinum toxoid vaccination in multiple species and strains of animals
- Identification of cohorts of Gulf War veterans and Gulf War era veterans for whom vaccination records exist, followed by careful studies of current symptoms, functional status, and disease status
- Long-term longitudinal studies of participants in the Anthrax Vaccine Immunization Program that would actively monitor and systemically collect and analyze data about symptoms, functional status, and disease status.

Report Availability

This report is available for sale from the National Academy Press, 2101 Constitution Avenue, N.W., Washington, DC 20055. For additional information, call (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the National Academy Press home page at www.nap.edu. The full text of this report is available at no charge at www.nap.edu/html/gulf_war/.

For information about the IOM, visit the IOM home page at www.iom.edu.

Additional Reviews Planned

The IOM will review the health effects of other important risk factors (for example, pesticides, insecticides, biological warfare agents, heat stress, solvents, paints, fuels, smoke from oil-well fires, and sand) for Gulf War veterans in future reports. In their

next report, begun September 1, 2000, the IOM is reviewing health effects from exposure to pesticides and solvents used in the Gulf War.

The IOM analyses are being conducted under a contract with the Department of Veterans Affairs (VA). The review includes assessment of biological plausibility that exposures, or synergistic effects of combinations of exposures, are associated with illnesses experienced by Gulf War veterans. VA will use the report to help establish health care and compensation policies on behalf of Gulf War veterans.

In 1970, the National Academy of Sciences chartered the IOM to enlist distinguished members of appropriate professions in the examination of policy matters pertaining to public health. In this, the IOM acts under both the Academy's 1863 congressional charter responsibility to be an advisor to the Federal government and its own initiative in identifying issues of medical care, research, and education.

The Presidential Advisory Committee on Gulf War Veterans' Illnesses first recommended the literature review. The General Accounting Office and the Senate's Special Investigation Unit on Gulf War Illnesses later recommended this project. In October 1998 and November 1998, Public Laws 105-277 and 105-368 provided a legislative mandate for the review.

Chemical and Biological Warfare Agents and Your Health – Researchers Search for Answers

Chemical and biological warfare agents are materials deliberately designed to cause lethal and debilitating toxic effects or acute infectious disease in humans. In the last decades and before the Gulf War the most common warfare agents of concern were organophosphorus (OP) agents such as sarin, soman and/or VX, and blistering agents such as mustard agent.

Aerosolized (airborne) active spores of the naturally occurring bacteria anthrax (*Bacillus anthracis*) and botulinum toxin, a protein agent formed by another bacterium *Clostridium botulinum*, were the biological warfare agents of greatest concern to military planners before the Gulf War. Anthrax infections occur naturally in farm animals but are also sometimes reported in humans. Humans become infected through contact with infected animals or by inhalation of spores from infected animal products, such as hides. Poisoning by botulinum toxin is also reported in humans, often through accidental consumption of contaminated food.

Possible Exposure in the Gulf War

Before the Gulf War, it was known that Iraq possessed both chemical and biological weapons, but DoD and the British Ministry of Defense have reported that neither chemical nor biological weapons were intentionally used by Iraqi forces against coalition forces during the Gulf War. The DoD has reported that one U.S. soldier may have received a burn in his arm from mustard agent, caused by accidental exposure while exploring a captured bunker in southern Iraq.

Just after the cease-fire was declared in Iraq, some Gulf War veterans may have been exposed to low or trace levels of chemical warfare agents. In March 1991, after the end of the Gulf War, U.S. service members used explosives to destroy a large ammunition depot at Khamisiyah in southern Iraq. It was later discovered that this site contained the nerve agents sarin and cyclosarin. During the demolition some of these agents were released into the atmosphere. Based upon the research carried out by the CIA, in 1997 DoD notified nearly 100,000 Gulf War veterans who had been in the vicinity of Khamisiyah at the time of the demolition that they could have been exposed to low-levels of these chemical agents.

The DoD has stated that no cases of acute (that is, obvious poisoning effects that occur within minutes after exposure) poisoning symptoms, which would have resulted from high-level exposure to nerve agents, were reported during the Gulf War. Nevertheless, some U.S. service members may have experienced low-level exposures from inhalation of airborne nerve agents in the Gulf War region following the 1991 cease-fire.

How it Enters and Leaves the Body

Chemical warfare agents can be absorbed either by breathing vapors or by skin contact. The primary exposure concern for sarin and cyclosarin is by breathing vapors. Mustard agent is primarily absorbed by skin contact, although breathing it is also an important form of exposure. All of these chemical agents are rapidly broken down in the body and excreted, primarily in urine, following absorption by breathing or skin contact.

Infections of anthrax can occur through breathing and skin and stomach exposure. Naturally occurring anthrax infection is usually through skin contact, and most commonly occurs in farm animals. Exposure for anthrax used in weapons is through breathing aerosolized spores. Breathing in anthrax leads to pulmonary (in the lung) anthrax infection, which in non-

military situations is a rare form of the disease compared to the infections of the skin and stomach.

What We Know and Don't Know about the Health Effects

The OP chemical warfare agents, including sarin, cause symptoms that are virtually identical to those caused by poisoning from OP pesticides. In people who have survived severe poisoning by these compounds, studies have shown subtle but detectable neurological deficits that may last months or even years. These effects have not been described in people who have only had mild or no immediate poisoning symptoms. Research is underway to explore what might happen in people showing either very mild or even no immediate poisoning effects.

Exposure to mustard agent can cause severe irritation and tissue damage including typical blistering, to eyes, skin and respiratory and digestive tracts. The symptoms and signs of mustard agent exposure are delayed for some hours following skin contact or breathing the vapors. The mustard agents are also considered to be likely carcinogens and humans exposed to mustard agent are thought to be at some increased risk of respiratory and skin cancers in decades following exposure.

Peter Spencer, Ph.D., Oregon Health Sciences University, suggests that veterans who volunteered in the 1960's for a U.S. study of the immediate effects of chemical agents and their antidotes be screened for any evidence of delayed health effects. In fact, VA and DoD are currently sponsoring such studies.

Anthrax spores following breathing germinate up to 60 days later. After germination, illness occurs rapidly as replicating bacteria release toxins that can lead to blood loss, swelling, and tissue damage. If left untreated, pulmonary anthrax infection is almost always fatal. There are no long-term health effects reported in individuals surviving pulmonary anthrax infection.

Symptoms caused by botulinum infection include respiratory distress and paralysis, and death can occur by suffocation. Some individuals surviving botulism poisoning from contaminated food or other natural sources experience residual weakness for as long as a year after disease onset.

Possible Effects with Children of Gulf War Veterans

OP nerve agents, including pesticides and chemical warfare agents, are not considered to cause birth defects. Although a developing fetus could be affected if the mother were exposed to these agents, in general,

this would not be relevant to Gulf War veterans. Mustard agents are considered to be likely human carcinogens, but current information is not sufficient to conclude that they have human reproductive health effects, especially following exposure to males.

Pulmonary anthrax is nearly always fatal if not treated immediately with antibiotics, but there is no evidence that individuals surviving anthrax infection are at increased risk for adverse reproductive health effects.

Botulinum toxin (in a purified form and in low doses) is actually licensed by the FDA for therapeutic uses as Botox®. Botulinum toxin is not considered to cause birth defects.

Testing to Determine Exposure?

Nerve and blister agents are rapidly broken down in the body and excreted as metabolites indicating exposure can be detected in urine in hours or at most a few days following exposure. But metabolism and excretion of these compounds will be complete within days in cases where the individual survives the initial exposure. There is no available test today that can confirm exposure to these chemical warfare agents that may have occurred several months or years in the past. There is no generally available test to detect exposure to anthrax at levels that did not cause actual clinical manifestations of infection. The body may react to low amounts of botulinum, but there is also no conventional test for exposure that may have occurred months or years in the past.

What Independent Scientific Review Groups Have Concluded

In their 1996 report, the Presidential Advisory Committee on Gulf War Illnesses (PAC) concluded that “[b]ased on available data, it is unlikely that health effects reported by Gulf War veterans today are the result of exposure to OP or mustard CW agents during the Gulf War.” Relative to biological warfare agents, the PAC concluded that “it is unlikely the health effects reported today by Gulf War veterans are the result of exposures to BW agents.” The PAC cautioned, however, that the amount of scientific information available regarding the health effects of chemical warfare agents is not very large.

The Defense Science Board Task Force on Persian Gulf War Health Effects (DSB) concluded in their 1994 report that “...there is no indication from research that there would be chronic effects from low level exposure even if it had occurred.” Relative to biological agents, the DSB concluded, “The diseases associated with BW

agent, e.g., anthrax, botulinum, etc., are notable for acute effects and would have been rapidly evident and readily diagnosed had they occurred among U.S. or coalition troops during the war.”

The Institute of Medicine 1996 report “Health Consequences of Service During the Persian Gulf War” (IOM) concluded that “...there is no available evidence in human or animal studies to date that exposure to nerve agents at low levels that do not produce any detectable acute clinical or physiological manifestations results in any chronic or long term adverse health effects.”

In the September 2000 report described in the article above, the IOM concluded that 1) there is sufficient evidence of a causal relationship between exposure to sarin and a dose-dependent acute cholinergic-syndrome that is evident seconds to hours subsequent to sarin exposure and resolves in days and months; 2) there is limited/suggestive evidence of an association between exposure to sarin at doses sufficient to cause acute cholinergic signs and symptoms and subsequent long-term health effects; and 3) there is inadequate/insufficient evidence to determine whether an association does or does not exist between exposure to sarin at low doses insufficient to cause acute cholinergic signs and symptoms and subsequent long-term adverse health effects.

That recent IOM report also recommended additional research to augment our understanding of the long-term health effects of exposure to sarin. Specifically, the IOM recommended: 1) careful long-term follow-up of populations exposed to sarin in the Matsumoto and Tokyo terrorist attacks; 2) studies in experimental animals to investigate the long-term effects of acute, short-term sarin exposure at doses that do not cause overt cholinergic effects and cause only minimal acetylcholinesterase inhibition; and 3) research on genetic factors that may alter susceptibility to sarin toxicity.

It is important to note that all of these independent review groups caution that we do not have a great deal of information to base conclusions about long-term effects of exposure to low-levels of chemical warfare agents, and that further research is justified.

For this article, we contacted several scientists from the Department of Defense with recognized expertise with regard to the long-term health consequences of exposure to chemical and biological warfare agents. Unfortunately, because of the controversial nature of this subject we were unable to get as many comments

as we would have liked. Here is some of what we were told:

Dr. Peter Spencer (identified above) commented the the results of this research are relevant not only to the future health of veterans, but also to the health of Americans who live close to U.S. sites where sarin and mustard will be destroyed via incineration under an international agreement to destroy stockpiled chemical weapons.

Dr. Mark A. Brown, Director, VA’s Environmental Agents Service, said that in essentially all independent reviews by scientific committees, chemical and biological warfare agents have not surfaced as the “smoking gun” cause of Gulf War illnesses.

What a Concerned Gulf War Veteran Should Do

Gulf War veterans with health concerns are encouraged to contact the nearest VA medical center for a Gulf War Registry health examination. The telephone number of the medical center can be found in local telephone directories under the Department of Veterans Affairs in the “U.S. Government” listings.

Veterans with service-related disabilities may wish to file a claim for disability compensation. A veterans services representative (VSR) at the nearest VA regional office or medical center can provide the application and any needed assistance. The national toll-free telephone number to reach a VSR is 1-800-827-1000. Veterans service organizations also may be helpful to Gulf War veterans seeking benefits from VA.

Cynthia Ramos, a full-time biology student at the University of Puerto Rico-Mayaguez Campus, was the principal author of the article above. Cynthia wrote this article in August 2000 while she was serving as a summer intern, through the Hispanic Association of Colleges and Universities (HACU), in the Environmental Agents Service. She expects to graduate in Spring 2001 and hopes to go to either Medical School or Graduate School.

Federally Funded Research in Low-Level Exposures to Chemical Warfare Agents

The federal research portfolio on Gulf War veterans’ illnesses consists of some 190 funded research projects with a total budget of more than \$150 million dollars. These projects, which began in 1993, consist of fourteen major research focus areas, each devoted to

determining the causes, diagnoses, and treatments for Gulf War Illnesses. A major research area that is of particular importance to Gulf War veterans is that of chemical warfare, and specifically the health effects of exposure to low-level chemical agents.

Low-level exposure to chemical agents is being studied as a possible cause of the ill health effects that some troops reportedly experienced after returning from the Gulf War. These potential encounters have prompted federally funded toxicology studies to be done examining the potential for long term adverse health effects stemming from short-term or low-level chemical exposures.

During the Gulf War, chemical detector alarms went off many times, and soldiers often had to put on their masks and protective uniforms. Some soldiers went home after the war with concerns about possible chemical agent exposures. In 1996, the Department of Defense (DoD) announced that U.S. troops may have had very low level exposures due to the demolitions at Khamisiyah, Iraq in March 1991. Fortunately, no troops developed any symptoms of sarin exposure at the time of the demolitions.

Since early 1997, DoD's Office of the Special Assistant for Gulf War Illnesses has investigated about 20 reported incidents of possible chemical agent exposure, and published reports on each incident. In one incident, one soldier was likely to have been exposed to mustard agent while exploring an Iraqi ammunition bunker. With the exception of Khamisiyah, the conclusions for all of the other published incidents, so far, were that exposure to chemical agents was unlikely or definitely did not occur.

20 Projects; \$16.6 Million

The federally-funded research on low-level chemical agents is comprised of a group of twenty projects with an overall funding of \$16.6 million dollars. Each of these twenty projects approaches from different angles the many questions regarding exposure to low dose chemical weapons. Some consider the short-term effects of specific chemical agents such as sarin or mustard agent, while others look at the long-term general health of potentially exposed veterans. Several studies are evaluating the health effects of low-level sarin exposure, in combination with pyridostigmine bromide or pesticides.

Of the twenty projects relating to the effects of chemical warfare, ten have already been completed, and another five are scheduled for completion by the end of

this year. New projects are continuously being added to those already underway as the research warrants.

Although no final conclusions have been made regarding low-level exposure to chemical agents, preliminary results have shown no difference between the health outcomes of troops in exposure areas versus troops in non-exposure areas.

One major study focused on the Khamisiyah demolitions, which occurred during March of 1991 and were thought at the time to have exposed up to 100,000 veterans to subclinical levels of sarin and cyclosarin. This study did not show any long term adverse health effects in veterans. Two other major studies of veterans with potential exposure due to the Khamisiyah demolitions will be completed next year.

The Department of Veterans Affairs, along with the Departments of Defense and of Health and Human Services, remain committed to research on potential exposures of chemical agents on Gulf War veterans. Some studies will go on for several years to come, while others will start as new information and/or new research approaches are identified.

The "Gulf War Review" will continue to provide information about these important research efforts.

Major Conference Planned for January 2001 to Focus on Research Initiatives

On January 24-26, 2001, approximately 300 Gulf War researchers and clinicians will convene in Alexandria, Virginia, for a major conference on federally sponsored research on Gulf War veterans' illnesses. The conference is entitled "Illnesses Among Gulf War Veterans: A Decade of Scientific Research."

The purpose and objectives of this conference, sponsored by the Research Working Group of the Military and Veterans Health Coordinating Board, is to bring together, in a common forum, researchers, clinicians, veterans, veterans' groups, and government officials to:

- Provide an opportunity for researchers to present and exchange study results;
- Provide an opportunity for veterans and veterans' groups to learn about ongoing research and to directly interact with researchers, clinicians, and government officials;

- Provide an opportunity to inform executive and legislative branches of the government about research and clinical initiatives related to the Gulf War that should be considered for future deployments;
- Inform clinicians of current practices for the treatment of Gulf War veterans' illnesses, and the latest research findings and their potential impact on clinical care;
- Learn from recognized experts in relevant areas of research about overarching research areas as they relate to the etiology, diagnosis, and treatment of Gulf War veterans' illnesses; and
- Encourage communication, cooperation, and collaboration among researchers, clinicians, and veterans.

This is the fifth conference of its type. The first was held at the Armed Forces Institute of Pathology in Washington, DC, in 1995. There were approximately 50 participants at that meeting. The second conference was held at Fort Detrick, Maryland, in 1997. In June 1998 and 1999, about 300 individuals attended the third and fourth conferences, which were held in Arlington, Virginia.

At the 2001 conference, a mix of renowned scientists, physicians, and health care providers will address the audience during keynote and plenary sessions. In the afternoon, key leaders in the field will preside over "thematic platform sessions" with presentations drawn from submitted abstracts that highlight the work of Gulf War veterans' illnesses researchers. Additional abstracts will be displayed during poster sessions. Special symposia for healthcare providers will also be held.

Individuals can register for the conference by mail, fax, or e-mail. The cost is \$175 if received by December 15, 2000, and \$225 if received after December 15, 2000. For additional information regarding registration contact the Gulf War Meeting, c/o Wendy Smith, SAIC Conference Services, 1710 SAIC Drive, T3-2-4, McLean, VA 22102; fax: 703-356-2714; e-mail: smithgw@saic.com. If telephoning the SAIC Conference Services (1-800-537-6074) for information, please ask for Conference Services and identify yourself as a Gulf War Meeting attendee. Phones are answered between 8:00 a.m. and 5:30 p.m. (EST).

Benefits Information: The Appeals Process and Other Matters

The most recent issue of the "Gulf War Review" included a guide to benefits, prepared by officials in the Compensation and Pension Service, Veterans Benefits Administration, Department of Veterans Affairs Central Office, Washington, DC, especially for our readers. The introduction to that guide indicated that the next issue of the "Review" would include information about appealing a VA claim decision. That and some additional information, also provided by Compensation and Pension Service staff, is described below.

What If My Claim is Denied?

If the VA Regional Office says your disability is not service-connected or if the percentage of disability is lower than what you think is fair, you have the right to appeal. The first step in appealing is to send the VA Regional Office a "Notice of Disagreement." This Notice of Disagreement is a written statement saying that you "disagree" with the denial. Be sure your Notice of Disagreement includes the date of the VA's denial letter and be sure to list the benefits you are still seeking.

The Notice of Disagreement must be sent to the VA Regional Office within one year of the VA Regional Office's denial of your claim or you cannot appeal.

In response to the Notice of Disagreement, the VA Regional Office will review the claim. If they do not change the decision, they will send you a "Statement of the Case." This will repeat the reasons stated in the VA's denial letter why your claim was denied and will include the relevant VA regulations. Once you get the Statement of the Case, if you still wish to pursue your appeal, you should file a VA Form 9, "Appeal to Board Veterans' Appeals," which is sent to with the Statement of the Case. You have 60 days from the date on the Statement of the Case, or one year from the date the VA first denied your claim, to file the VA Form 9. Whichever date is later is your deadline.

At any point, you can request a hearing at the VA Regional Office.

Can I Appeal Beyond the VA Regional Office?

The Board of Veterans' Appeals (also known as the "BVA") is a part of the VA, located in Washington, D.C. Members of the BVA review benefit claims decisions made by VA Regional Offices and issue a

new decision. You may have a hearing before the BVA in Washington, DC, or at your VA Regional Office.

Anyone appealing to the BVA should read the "Understanding the Appeal Process" pamphlet. It explains the steps involved in filing an appeal and serves as a reference for the terms and abbreviations used in the appeal process. The BVA mails a copy of this pamphlet to anyone who has appealed their case to the BVA. It is also available on the Internet at www.va.gov/appeals/index.htm.

What If BVA Denies My Claim?

If the BVA does not grant all the benefits you are seeking, you have four choices:

- decide not to pursue your claim
- appeal to the U.S. Court of Appeals for Veterans Claims
- ask the BVA to reconsider its decision or
- reopen your case at the VA Regional Office with new and material evidence.

Appealing to the Court

You may appeal to the Court only if BVA has denied some or all of your benefits. You may not appeal a BVA decision to remand your claim back to the VA Regional Office. You must file your appeal within 120 days of the BVA decision you want to appeal. To appeal, mail or fax a statement that you want to appeal the BVA decision to the Court. This should include your name, address, phone number, and the date of the BVA decision. Send it to:

Clerk of the Court
U.S. Court of Appeals for Veterans Claims
625 Indiana Avenue, N.W.
Washington, DC 20004

Fax number: (202) 501-5848

To get a list of veterans' representatives who practice at the Court, or to learn more information on the Court, see the Court's web site at www.vetapp.uscourts.gov/howapeal.htm. This list is also available by calling the Court at 1-800-869-8654.

Ask BVA to reconsider

The BVA will reconsider its denial decision, if it finds an "obvious error of fact or law" in that decision. Such a request should be sent to the BVA.

Reopen your case

If you can get additional evidence that is both new and material, you can reopen your claim at the VA Regional Office and get a new decision.

Social Security Benefits

The Social Security Administration (SSA) offers both disability insurance benefits and supplemental security income benefits. Veterans can receive both Social Security Disability Insurance benefits and VA disability compensation. There is an offset of the Supplemental Security Income benefits with VA pension or compensation. Unlike VA compensation benefits that are measured in degrees of disability, SSA benefits require a total disability that will last at least one year. If you cannot work because of your disability, contact the nearest district office of SSA at 1-800-772-1213. SSA benefits information is available on the Internet at www.ssa.gov.

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Independent Study Course for VA Physicians Designed to Enhance Knowledge and Response to Gulf War Veterans

VA officials in the Environmental Agents Service in VA Central Office in Washington, DC, are working on a Continuing Medical Education independent study course on the possible health consequences of Gulf War service. The course, which should be completed in about six hours, is primarily directed at VA physicians although it will be of interest to other health care providers who treat Gulf War veterans.

The course describes the history of Operations Desert Shield/Storm, VA and the Department of Defense clinical examination programs, and important research initiatives. It also includes a lengthy discussion of major health risk factors, including pesticides, chemical and biological warfare agents, vaccinations and pre-treatments, depleted uranium, and infectious diseases. The program also describes the situation with undiagnosed illnesses and disability compensation and describes the extensive outreach and education efforts. It is hoped that this program will increase general knowledge about and sensitivity to the health problems of Gulf War veterans and promote better health care services.

The editors anticipate that the program will be finalized later this year. Additional information about the course will be included in future issues of the "Gulf War Review."

Web Site Activated

See www.va.gov, click on Veterans Benefits and Services, click on Health Benefits and Services, click on Programs, click on Gulf War Veterans' Health. This VA site features current and back issues of VA's "Gulf War Review" newsletter, other publications, and answers to frequently asked questions.

These publications can be searched by key-word or information on specific health concerns, Gulf War environmental exposures, Gulf War veterans compensation policy, research on Gulf War health, and other specific Gulf War activities.

Q's and A's

The "Review" occasionally includes a questions-and-answers section in which Department of Veterans Affairs (VA) officials respond to inquiries from readers

regarding the Gulf War experience, problems experienced by Gulf War veterans and their families, and programs initiated by the VA and other federal departments and agencies to help these veterans and their families.

Questions should be sent to Mr. Donald J. Rosenblum, Deputy Director, Environmental Agents Service (131), Attn: GW Review – Q's & A's, 810 Vermont Avenue, N.W., Washington, DC 20420.

Q. What reports have been done to uncover information regarding sterility rates among soldiers who served in the Gulf? This question was submitted by JPM who identifies herself as a midwife and nurse practitioner. She added that her lover was very potent before he went and that since returning "his count" dropped precipitously and they have been unable to conceive.

*A. There is no evidence that Gulf War veterans are experiencing an increase in reproductive problems. There was a large, national study, published in 1997, in the *New England Journal of Medicine* that showed that there was no increase of birth defects in offspring. Another large, national study has been completed by a group in San Diego, will be published soon. That study compared 10,000 Gulf War veterans with an equal number of veterans who were not deployed to the Gulf War. Researchers found no differences in the rates of infertility or babies with low birth weight among the two groups.*

There are many reasons why a man may have a low sperm count. There are a variety of treatments available. Men experiencing such problems are well advised to consult a VA physician.

Q. Is there a study of swelling of joints with severe pain that last from 4–10 days in Gulf War veterans?

A. No, not that we are aware of. The studies on illnesses in Gulf War veterans focus on long-lasting symptoms (usually lasting at least six months or more.)

Gulf War Health Registry Statistics

Number of Initial (1st time) Registry Health Examinations Since the Beginning of the Program (as of July 25, 2000): 79,710

Number of Initial Registry Health Examination most recent month (as of July 2000): 298

Number of Veterans Admitted to VA Gulf War Referral Centers — Birmingham, AL; Houston, TX; West Los

Angeles, CA; Washington, DC – Since the Beginning of the Program (as of July 2000): 685

Most active VA medical centers – Number of Registry Health Examinations Since the Beginning of the Program (as of August 10, 2000):

Fayetteville, NC	2,181
Decatur, GA	1,938
Central Texas Veterans Health Care System (Temple and Waco)	1,912

San Juan, PR	1,804
Denver, CO	1,782
Birmingham, AL (with Huntsville Outpatient Clinic)	1,682
Tampa, FL (with Orlando and Port Richey Outpatient Clinics)	1,491
Oklahoma City, OK	1,458
Middle Tennessee Health Care System (Nashville and Knoxville)	1,384
Washington, DC	1,276

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).

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

Veterans who have been diagnosed with a motor neuron disease (including **amyotrophic lateral sclerosis or Lou Gehrig's disease**) and who were on active duty between August 2, 1990, and July 31, 1991, regardless of whether they actually served in the Gulf War theater of operations (or family/friends of veterans who are deceased or otherwise unable to contact VA) – call 1-877-DIAL-ALS (1-877-342-5257) to participate in a national survey.

For additional information about VA's program initiatives, see VA's Gulf War **veterans' illnesses** home page at <http://www.va.gov/gulf.htm>.

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., may also be very helpful to Gulf War veterans, especially veterans who are seeking disability compensation.

Readers Survey

Early this year the leadership of VA's Environmental Agents Service, the office that prepares this newsletter held a series of meetings with representatives from veterans service organizations to discuss VA outreach efforts on behalf of Gulf War veterans and of Vietnam veterans, who may have been exposed to Agent Orange. Discussions focused on our national newsletters, the "Gulf War Review" and the "Agent Orange Review." A number of suggestions for improvement were offered; some were approved and implemented.

We are also seeking advice and recommendations from all readers. In a future issue of the "Review," we will report to you regarding the comments we receive. Please send your comments and ideas to Mr. Donald J. Rosenblum, Deputy Director, Environmental Agents Service, ATTN: Gulf War Review, VA Central Office, 810 Vermont Avenue, NW, Washington, DC 20420. You can use this paper or write on your own.

What do you think of the "Review"?

Does it meet your needs? Why or why not?

What changes would you like to see in this publication? Additions? Deletions?

Additional comments or suggestions?

Thank you for your comments.

Gulf War Review
Information for Veterans Who
Served in Desert Shield/Storm
October 2000

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