



## VA Depleted Uranium Programs Seek to Address Veterans' Concerns

The Department of Veterans Affairs (VA) has established a Depleted Uranium (DU) screening program for Gulf War veterans who are concerned about the possible long-term health effects of DU exposure. The purpose of this communication is to describe: (1) DU and how veterans may have been exposed to it; (2) the known health effects of DU; (3) the DU screening program; and (4) the Baltimore DU Follow-up Program.

### Depleted Uranium Exposure

DU is the natural uranium left over after more of the highly radioactive uranium isotopes used in nuclear power plants and weapons are extracted. DU contains about half of the radioactivity of natural uranium. It is considered a very low-level radioactive material. However, as with other heavy metals, such as lead, uranium can be toxic to the kidneys and other organs including the lungs.

Depleted uranium was first used in the development of major weapon systems because of its high density and superior mechanical properties, and because it is relatively abundant and cost effective.

American troops in the Persian Gulf were exposed to DU in several ways. A few were injured by "friendly fire," more were crewmembers in relatively close contact with munitions in tanks or other vehicles. U.S. soldiers may have been exposed to smoke or particulate containing DU while fighting a fire at Doha Depot or by entering or salvaging vehicles or bunkers that were hit by DU projectiles.

### Limited Health Information

Information on the possible health effects of DU exposure in military settings is limited. Most information about possible effects on humans comes from studies of uranium miners and parts' manufacturers and associated occupations, which are somewhat different from Gulf War veterans. For example, miners were possibly exposed to radon and other toxic substances present in the mines, making their experience not directly comparable to Gulf War veterans. Other significant differences relate to the length and intensity of exposures. Uranium workers are typically exposed over a long period of time while veterans typically had brief exposures.

The miners studies did find that long-term chemical exposure can affect the kidneys and long-term inhalation may cause lung problems. Uranium miners who inhaled uranium dust for extended periods showed increased risks of lung cancer. However, exposure to radon accounts for virtually all of this increase lung cancer risk. Animal studies have not shown that natural uranium causes lung cancer in animals. At present, it is not known to what extent, if any, DU exposures will affect the health of Gulf War veterans.

### Screening Program

Gulf War veterans who are concerned about potential DU exposure are invited to contact the Gulf War Health Registry Coordinator at their nearest VA Medical Center. Interested veterans may request a DU protocol examination that includes a complete Gulf War Registry examination (if not already done), a DU exposure questionnaire, and if needed, a 24-hour urine collection for total uranium. The 24-hour urine test measures total uranium, not DU specifically. However, this urine test would detect any DU that is present.

As noted previously, uranium is a naturally occurring metal that is present in the food and water we consume. Therefore, a certain amount of uranium is expected to be present naturally in the urine. The amount expected would depend on how much uranium is consumed in one's daily diet. At present, there is no valid technology that is sensitive enough to accurately distinguish DU in a urine sample where the total uranium is low enough to be considered normal. (Normal means that the amount of uranium would be expected based on food and water consumption.) If an individual's sample falls above the normal limits, isotopic analysis to specifically determine the amount of DU will be performed.

### Baltimore DU Follow-Up Program

In 1993, the VA established the Depleted Uranium (DU) Follow-up Program at the Baltimore VA Medical Center. This clinical surveillance program was designed for identifying, characterizing and following individuals exposed to DU during the Gulf War. The goals of the follow up project are to provide an on-going clinical surveillance of Gulf War veterans who have known or suspected imbedded DU fragments, DU contaminated wounds, or large amounts of inhaled DU. The clinical surveillance is designed to detect the health effects, if any, of DU containing shrapnel or inhalation exposure, and to provide recommendations for treatment to participating veterans and the physicians caring for them.



The medical follow-up program is also involved in the coordination and distribution of urine analysis materials for the DU screening program. The staff assists with processing specimens, coordinating specialized tests and analysis, and reporting results to patients, physicians, and the Gulf War database.

Most of the people participating in the DU follow-up program were exposed to DU when their U.S. Army vehicle was struck by DU containing munitions. Veterans of friendly fire incidents during the Gulf War are being invited to participate in the scheduled clinical evaluations.

In addition to helping individual veterans, the information gained through the DU screening and medical follow-up programs will improve our understanding of the potential health effects of DU and expand our knowledge about fragment removal, uranium absorption and distribution, and how uranium is eliminated from the body. Program officials hope that the program will also improve methods of the evaluation of uranium dose and the detection of health effects.

In addition, the DU program hopes to improve ways to evaluate toxic effects from low dose uranium exposure.

## **Other Problems**

Other Gulf War veterans who think that their health problems are related to service in the Gulf War, including but not limited to DU exposure, are encouraged to contact their 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 Department of Veterans Affairs in the "U.S. Government" listings. Gulf War veterans may wish to contact the nearest VA veteran center for readjustment counseling. Many of the counselors there are themselves military veterans. The telephone number can be found in the local directories as described above.

Veterans with service-related disabilities may wish to file a claim for disability compensation. A Veterans Benefits Counselor (VBC) at the nearest VA regional office or medical center can provide the application form and any needed assistance. The national toll-free number to reach a VBC is 1-800-827-1000.

## **Federal Leadership and Biomedical Research; Status of Gulf War Research; The Chief Responses to the Critics**

*The following is an excerpt of remarks by Dr. John R. Feussner, Department of Veterans Affairs Chief Research and Development Officer at the Fourth Annual Conference on Federally Sponsored Gulf War Veterans' Illnesses Research, in Arlington, Va., on June 23, 1999.*

I'm pleased to see so many practicing clinicians comingling with so many veterans and so many scientists. I want to thank publicly the members of the three executive level departments - Veterans Affairs, Defense, and Health

and Human Services - who work persistently and cohesively to deal with the significant challenge, though I think tractable challenge, of Gulf War veterans' illnesses. I also want to thank the scientists and clinicians that have brought to bear on this issue of Gulf War veterans' illnesses their considerable intellect, clinical and scientific expertise. It offers us hope that one day we will understand these problems better and one day be able to treat these illnesses more effectively.

I want to talk briefly about the bench-to-bedside paradigm not so much in a translational mode today but really in a spectrum mode. That is to recognize the value of research along the entire spectrum from the most basic research to the most applied clinical and epidemiological research.

I'll start with a quote from President Roosevelt ....

He said:

"The defense this nation seeks involves a good deal more than building airplanes, ships, guns and bombs. We cannot be a strong nation unless we are a healthy nation. And so we must recruit not only men and materials, but also knowledge and science in the service of national strength."

I think it is important that the President of the United States 60 years ago recognized that the strength of the national defense rests on the health of each and every individual soldier and that that responsibility ought to continue when the soldier stops being a soldier and becomes a veteran. Interestingly, the event of this speech was the dedication of the National Cancer Institute on what is now the Bethesda campus of the National Institutes of Health. I will come back to cancer research later.

We talked earlier of the role of our research. Establishing a linkage between the Gulf War and subsequent medical conditions - an apparently simple mission. It is important in a variety of ways. The statement presumes that there is in fact a linkage between service in the Gulf and subsequent illnesses. And the statement presumes that we are committed to pursue that linkage and to clarify some of the issues surrounding the illnesses that our patients' experience.

Now this is the role of research in the particular area of Gulf War veterans' illnesses... Interest in the nature of disease; the nature specifically of these illnesses. The frequency of symptoms; the frequencies of diagnosable conditions, diagnosable diseases. Things we at least know and can name today. Identifying risk factors for excess morbidity. We certainly already know there is excess morbidity. The issue of excess mortality requires additional years of research. Then, if possible, identify diagnostic tools to help us clinically say what these illnesses are. And then treatment methods that we might apply to make our patients better.

It's always very straightforward to be critical. Tearing buildings down is fundamentally easier than building them up. These are some of the criticisms I've had the pleasure of experiencing over the past three years as chairperson of the Research Working Group of the Persian Gulf Veterans Coordinating Board. This is my perspective on the criticism. The criticism that the research effort is not organized and not comprehensive. I would say it's quite complex and quite

extensive. Think about it. The entire spectrum of research is represented in this room, from the most basic science in molecular biology through clinical research, patient focused research. Through population-based epidemiology that involves national studies in multiple countries. Research that looks at the disease paradigm from all its perspectives; the basic mechanisms of the disease. Issues relating to etiology and causation. How the disease works through time. That is, what is its clinical course or natural history? Issues relating to possible diagnostic clues and treatment options.

Look around you. We have physician scientists, epidemiologists, and clinical trialists. We have biomedical scientists, in biochemistry, physiology, immunology, toxicology, molecular biology, genetics. Complex, extensive, all focused on one issue: understanding this complex array of illnesses associated with Gulf War service. I've been told we don't know the cause of these illnesses, as though that is somehow unusual. Everyone who practices medicine knows that the most difficult problem on teaching rounds with medical students is that they ask hard questions like, Why does this patient have hypertension? What is causing this essential hypertension? Why is this patient having it now and not five years ago or five years from now? What is the cause of Type 1 diabetes? Why do patients have Alzheimer's Disease? What is the pathophysiology and the cause of amyotrophic lateral sclerosis? I don't know the answer to any of those questions. These are common diseases we've been studying for centuries. So I'm not troubled we don't know the cause of Gulf War illnesses. I think we have to keep looking, but I'm not surprised.

We've also been criticized because we don't have a cure. I would remind you that that is, in fact, the definition of chronic illness. By definition, an illness is chronic when it can't be cured. Again we can use the same series of examples: hypertension - lifelong treatment; diabetes - lifelong treatment. The surgeons have the luxury of curing many illnesses, internists and others perhaps not.

I'll try to put some of this effort in context and to try to focus on what I see as the major issue, which is persistence. Persistence is working day by day, study by study, finding by finding, to make a breakthrough. I thought I'd use a piece I read recently on the war on cancer, especially given President Roosevelt's earlier quote.

Here's the justification for the war on cancer. Cancer is a problem of public health proportions. What is the justification for research on Gulf War veterans' illnesses? It is a significant and prevalent problem among our Gulf War veterans. What is the outcome of interest? In cancer, the outcome is mortality, Cancer, as we know, is the second most common cause of death in the United States. In Gulf War illnesses, the outcome of interest is morbidity. Who are the funding agencies? They are listed here - DoD, VA and HHS. What is the time to cure? When another President, Richard Nixon, initiated the war on cancer, he thought it would take about five years, so he said in 1976, to cure the disease. What he should have said is that we will invest considerable time and energy in trying to cure these diseases. Of course, that date has come and gone. The funding horizon on the war on cancer has been three decades. In Gulf

## 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.

The most recent, prior to this, issue of the newsletter is dated June 1999. 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), three in 1996 (March, September, and December), three in 1997 (March, June, and September), and four in 1998 (March, June, October, and December). This issue is the third for 1999. Earlier issues were published in March and June 1999. It was completed in August 1999 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 issues released in 1995-99 is available. Please specify the quantity and issue date requested. VA facilities should order additional copies from the VA Service and Distribution Center.

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 Hotline: 1-800-749-8387.

War illnesses we've just gotten started. The investment in public research dollars has been substantial -- 35 billion in the war on cancer and, so far, 133 million in Gulf War veterans' illnesses.

Progress? Yes. How? Incremental. Will we succeed? Yes. How? By being persistent. What many folks don't realize is that every scientific breakthrough, every dramatic scientific breakthrough, is built on a thousand scientists, thousands of scientists and thousands of research projects incrementally making thousands of observations validated by other scientists until we get to the top and make the breakthrough.

... [t]he three executive branches and their contributions over the years in millions of dollars [are] ....significant... (DoD \$100.9, VA -- \$15.3, HHS -- \$7). [There is a broad] ...spectrum of ... research ... - diseases of the brain and nervous system, diseases looking at immune functions, issues related to chemical weapons exposures and so on; a broad-based research effort. Not narrowly focused, but certainly broad based,

And what are these research paradigms that we're talking about? Basic biomedicine, epidemiological research - especially population-based epidemiological research -- and clinical research. Certainly epidemiological research is clinical, but by clinical here I really mean patient-based, so that the focus of the first is very basic biology and chemistry, The focus of the second is a population. And the focus of the third is an individual patient.

... I've been interested in ... the issue of pyridostigmine bromide [PB] permeating the blood- brain barrier under stress, What this research demonstrates is two points I wish to make. First, that gains in knowledge are incremental, associated with a lot of years of hard work. Second, the process is, at least, complex and at times apparently confusing. The background is that PB has been recommended by many Western governments as a pre-treatment when there is a threat of chemical warfare as there was in the Gulf War. PB is a quaternary ammonium compound. It doesn't make it through the blood-brain barrier. The observation is that perhaps stress can disrupt the blood-brain barrier and somehow influence this process,

... [There] is a study published in the journal, Nature, some years ago. Mice, the species of interest, were subjected to forced swim protocol, the stressor of interest. What was observed was that when these animals were stressed in this physiological way, the blood-brain barrier became permeable to compounds, which it previously was not. Under this stress, the pyridostigmine bromide was able to cross the blood-brain barrier with sufficient facility so that it could inhibit the acetylcholine esterase in the brain at 1/100th of the usual dose. An interesting observation! The question was, can peripherally acting drugs reach the brain and actually affect centrally controlled functions under conditions of stress? The data would suggest that the answer to that question is yes.

We change venue and go to France where Dr. Guy Lallement did another piece of work. Here the species is different - guinea pigs. The stressor is different, It's heat stress. The scientist raised the core temperature of these rodents from 39.8 to 44.3 degrees Centigrade. Yes, if the animals are maintained at a temperature above 44 degrees, they die. So this is a terrible stress. The animals experienced heat stroke, that is they became unresponsive - extreme prostration. And what did he find? That there was no increase of permeability of the blood-brain barrier to pyridostigmine bromide.

Are these two observations in conflict? Not necessarily, The stressors are different. The animal species are different, Imagine a situation where you would have in each of these species only one stressor. Imagine if you would have multiple

simultaneous stressors. And imagine if the species of interest was a human. What might we find? That answer is not quite completely known yet.

The epidemiological research ....make(s) another point. That other point is the frustration not just with the incremental nature of the basic science observations, but the long period of time it takes to make observations in epidemiological studies. This is the national health survey of veterans .... Phase one of this observational study - a cross-sectional look at veteran population; mail questionnaire, self-reported information, large sample of veterans. Now the second phase, dealing with some methodological problems; non-respondent bias, validating by chart review that some of the symptoms reported in the study were also reported by physicians.

We are currently in the midst of phase three of this national survey where we actually see the patients, examine the patients. There are 5,000 veterans, spouses and children in this Congressionally-mandated study; a thousand veterans who were deployed, a thousand who were not, their spouses and children. The VA is not equipped to deal with pediatric examinations, so we have engaged the help of our medical school affiliates in that regard.

... (T)he national mortality study.., is a retrospective cohort study that continues and will continue for decades. It has a (l)arge sample size of Gulf War veterans and control groups. At this point in time no disease-related excess mortality. Does that mean there is no excess disease-related mortality? No! The time horizon to follow up is too short, just five or six years. Again, the difficulty with this line of research is that it doesn't just take years, but sometimes decades, to know definitively whether there are exposures that actually affect patients' mortality.

A similar study done in another country. Again, it's important that these observations are done in different populations. Here's a study you'll hear more about today, a survey of UK servicemen. A very interesting nuance in this study involving not just Gulf War-deployed, but Bosnia-deployed veterans. Again, a cross-sectional survey looking at symptoms and disorders. I apologize for over simplifying a tremendous amount of work, but the study essentially finds that Gulf War veterans have more symptoms and disorders than the Bosnia veterans and the non-deployed veterans, with some other issues raised about uniqueness of the symptoms and potential associations with vaccination strategies.

And where are we now? Now we are at the next component in this research process. That is very specific patient-centered research that systematically addresses the issues of treatment. I have two examples that give some perspective on issues relating to treatment trials and issues relating to experimental research that is conducted on human beings and our concern about that. There were extensive planning processes in both these trials. International expertise was assembled to help with the planning of the trials. There was intense scientific review. Not just national scientific review, but multiple IRB (Institutional Review Board) review as well. For example, in the antibiotic trial, not only national

review by a federal review panel, but review by an additional 30 IRBs. You could legitimately say that these research projects have been reviewed 31 times by 31 separate bodies, Human studies review, of course. Full compliance with FDA regulations. Again, using a drug that's off the shelf, doxycycline, for a disease and a condition for which it is not approved requires FDA concurrence.

Here is a typical paradigm for clinical research involving a treatment strategy. Knowing explicitly and *a priori* what the question of interest is. Selecting and recruiting the patients, I'm pleased to say this is going well. Having an intervention that is explicit and replicable so that if the intervention works the goal here is that any physician could administer this intervention. Outcome measures that are explicit and pre-defined. And success that is explicit and pre-defined. Issues of statistical power. Issues of *a priori* statements for analysis plans. Oversight, oversight, oversight! Not only from an executive committee, but from a full time DSMB - data, safety and monitoring board.

I have presented a broad spectrum of research, from a very basic chemistry of how chemicals cross the brain to large epidemiological studies involving huge populations of patients. In Dr. Kang's study [the national health survey of veterans]...down to treatment trials, which study just enough patients to answer the research question with statistical power.

I am, quite frankly, very proud to be associated with this effort, and very pleased that all of you have been willing to invest so much of your time, energy and creativity as we try to clarify these issues. I'll close with another quote.

This is a quote from Dr. Charles Coulston Gillispie circa the Italian renaissance. I think this says it all and really expresses my views on this spectrum of research.

"Knowledge finds its purpose in action, and action its reason in knowledge."

I would encourage you during this conference, if you are epidemiologists, to attend some of the biomedical science presentations. If you're a biomedical scientist, extend yourself and go to some of the "epi" presentations. Co-mingle. Exchange ideas. Develop new ideas. And remember that the purpose of the effort is to clarify the problem and to help the patient.

## **Annual Report to Congress Documents Massive Research Effort**

The Department of Veterans Affairs (VA) recently released the Annual Report to Congress - 1998--Research on Gulf War Veterans' Illnesses, which describes 145 federally-sponsored projects related to Gulf War veterans' illnesses. The scope of federally research is broad, from small pilot studies to large-scale epidemiology studies involving large study populations and major research and academic medical center programs using significantly large amounts of appropriated research funds.

According to the Annual Report, the Federal Government is projecting cumulative expenditures of \$133.5 million for this research from Fiscal Years 1994-1999. Through 1998, 40 projects have been completed, 103 are ongoing, and 2 projects have been awarded funds and are pending start-up.

The latest report indicates that Federally-funded researchers have initiated a number of new research efforts over the past year to help solve the complex question of why many Gulf War veterans are ill. Although further study is needed and is ongoing, research to date from systematic clinical examinations has not confirmed a unique syndrome or a characteristic organic abnormality.

Because of the complexity of the issues, the report's assessment of newly completed studies -- along with preliminary findings reported from ongoing work -- does not offer simplistic conclusions, noting that these findings are gradually building a body of knowledge about the health of Gulf War veterans and potential risk factors that concern them.

Among new research and initiatives cited in the report are:

- VA takes the lead in a \$20 million effort with Department of Defense (DOD) to conduct two separate major studies of possible treatments for the symptoms of the undiagnosed illnesses of Gulf War veterans at more than 30 VA medical centers nationwide and two DoD medical centers. One study will test whether exercise and cognitive behavioral therapy (CBT) improve physical function. The other treatment trial (ABT) will test whether an antibiotic is effective in treating the illnesses reported by Gulf War veterans.
- VA National Survey Phase III Examinations - September 1998 marked the initial examinations of 1,000 randomly selected deployed and non-deployed veterans and families at 17 VA medical centers nationwide.
- DoD funded nine new projects that will examine the biological basis of the illnesses affecting Gulf War veterans. These studies will give us information that will help ill Gulf War veterans and prevent similar illnesses in troops involved in future deployments.
- DoD established a program for national surveillance of birth defects among DoD beneficiaries.
- The FY99 Defense Authorization Bill authorized DoD to establish a Center for Deployment Health. Deployment health centers for focused clinical, research, and surveillance efforts are planned.
- VA is establishing a public advisory committee (Gulf War Veterans' Illness Research Advisory Committee) to provide advice on proposed research studies, research plans, or research strategies relating to the health consequences of military service in the Southwest Asia theater of operations during the Gulf War. The Committee will be comprised of a wide range of experts including scientists, Gulf War veterans,

and representatives who are able to represent the concerns of veterans of the Gulf War.

- Future research priorities established in 1998 include: research on treatments and longitudinal follow-up of Gulf War veterans' illnesses; research on improved disease prevention; and research to improve environmental and occupational hazard identification and risk assessment. On August 31, 1993, President Clinton asked the Secretary of Veterans Affairs to coordinate research funded by the Executive Branch of the Federal Government into the health consequence of Gulf War service. VA carries out its research coordinating role through the auspices of the Research Working Group of the Persian Gulf Veterans Coordinating Board, chaired jointly by the Secretaries of Defense, Health and Human Services, and Veterans Affairs.

VA is required to submit an annual report to Congress on the research results, status, and priorities for the each year. The recently released document is the fifth report on such research. This six-section report highlights and summarizes research progress since the last annual report by analyzing the Federal Government's research portfolio on Gulf War veterans' illnesses, highlighting significant research and research-related events and milestones, discussing the management of Federal Gulf War veterans' illnesses research programs, including research oversight, peer-review and coordination, and articulating priorities for future research.

The report also includes important and relevant background information not strictly research-related to help the reader to better understand the overall context related to Gulf War veterans' research issues.

The report is available on the Internet at <http://www.va.gov/resdev/pgrpt98.htm>. A very limited supply is also available from the Environmental Agents Service (131), Attn: Annual Report, VA Central Office, 810 Vermont Avenue, N.W., Washington, DC 20420.

## **IOM Committee Public Meeting Planned for December 15**

In recognition of scheduling conflicts that may preclude veterans and other interested individuals from attending the meeting of the National Academy of Sciences Institute of Medicine (IOM) Committee on Health Effects Associated with Exposures Experienced During the Gulf War public meeting on September 16, 1999, the Committee is adding a public meeting session to its December 1999 meeting.

The December public meeting will be held from 1:30 to 4:30 p.m., December 15, 1999, in the Lecture Room of the National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, DC. Seating is limited and advanced registration is strongly recommended. For those who are unable to register in advance, on-site registration for observers only will be held throughout the day, as space is available.

The IOM Committee was established to provide the Department of Veterans Affairs (VA) with a comprehensive review and analysis of scientific/medical information regarding adverse health effects associated with exposures experienced during the Gulf War. This review is being conducted under a 27-month (June 1, 1998-August 31, 2000) contract. The IOM is a non-governmental unit of the National Academy of Sciences.

Organizations or individuals interested in registering for the meeting or learning more about the Committee can contact the IOM directly. The mailing address is Institute of Medicine, National Academy of Sciences (FO3030), 2101 Constitution Avenue, N.W., Washington, DC 20418. The fax number is 202-334-2939. The e-mail address is [PGHEALTH@NAS.EDU](mailto:PGHEALTH@NAS.EDU). The telephone number is 202-334-2039.

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## New Leadership for VA Gulf War Program

On August 30, 1999, Dr. Mark Brown replaced Dr. Frances M. Murphy as Director, Environmental Agents Service (EAS), VA Central Office. As Director, he oversees the management of Veterans Health Administration programs dealing with the health concerns of Gulf War veterans, Agent Orange issues, Ionizing Radiation exposure, and related environmental matters. Before joining VA, Dr. Brown worked on a wide variety of public health and environmental issues in federal and state government, private industry, university research laboratories, and nonprofit organizations. Most recently, he worked at the U.S. Department of Commerce on nonproliferation.

Previously, he served 2½ years on the staff of the Presidential Advisory Committee on Gulf War Veterans Illnesses. There he directed the review of Gulf War health risk factors, including exposure to chemical weapons, pesticides, depleted uranium, infectious diseases, petroleum products, and psychological and physiological stress.

He received an M.S. in organic chemistry from the University of Oregon at Eugene and a Ph.D. in environmental chemistry at the University of California at Berkeley.

Dr. Murphy, a neurologist, headed the EAS since 1994. She has been detailed to the position of Deputy Under Secretary for Health for 120 days. Since 1997, Dr. Murphy also has served as Chief Consultant, Occupational and Environmental Health Strategic Healthcare Group.

No immediate policy or procedure changes are anticipated as a result of the personnel actions.

## III Spouse/Children of Gulf War Veterans Encouraged to Participate in Health Examination Program

VA officials are encouraging and welcoming the spouses and children of Gulf War veterans to participate in an examination program designed to identify their problems and suggest possible areas for researchers. The health examination program for certain spouses and children of Gulf War veterans that the Department of Veterans Affairs (VA) established in April 1996 has provided valuable health status information to participants. Last year, with the enactment of Public Law 105-368, this program was expanded and extended through December 31, 1999.

To be eligible for participation, an individual must (1) be the spouse or child of a veteran who is (a) listed in VA's Gulf War Veterans Health 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. The examinations have been provided at more than thirty locations.

In addition to extending the program, Public Law 105-368 provided for program improvements through "enhanced flexibility," by permitting examinations to be completed under a fee arrangement and providing for VA payment of certain transportation expenses. Due to the complexity involved in contracting for pediatric examinations and the great distance many spouses and children were travelling for examinations, VA now is allowing facilities the option of paying private providers to conduct the examinations. The veteran (or spouse) must still call the toll-free Helpline (**1-800-PGW-VETS; 1-800--749-8387**) to register for this program and confirm their eligibility. Please note that no payments can be made to private physicians unless the above requirements are met and the spouse or child is officially enrolled in the examination program.

When the veteran is notified of program enrollment by the coordinating facility, he or she may request that the examination be conducted by his or her private physician. Private physicians must agree to fill out all required VA forms to obtain payment. If reimbursement for travel is required, VA will provide payment at the same rate as beneficiary travel for veterans. Reimbursement of travel costs is processed in the same way as payment for the examination, that is, all reimbursements are paid by the VA Denver Payment Processing Center.

Questions about this program should be directed to the Gulf War Veterans Helpline (**1-800-PGW-VETS; 1-800-749-8387**). Individuals wishing to participate in the program should call this toll-free telephone number. No treatment is available for illnesses detected in this program. Authority for the program was initially established in Public Law 103-446. It was extended by Public Law 104-262, and, as noted above, most recently by Public Law 105-368, the Veterans Programs Enhancement Act of 1998, signed by President Clinton on November 11, 1998.

## 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**.

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.

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 Gulf War veterans, especially veterans who are seeking disability compensation.

# Gulf War Review



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