



VA Fact Sheet

April 2000

ILLNESSES OF GULF WAR VETERANS

Highlights of VA Programs

- **Patient Care.** VA operates a toll-free hotline at **1-800-749-8387** to answer Gulf War veterans' questions and to assist them with referrals to VA facilities for medical care if needed. VA offers a full spectrum of health-care services for Gulf War veterans, from free physical examinations for healthy-but-concerned Gulf War veterans to those needing ongoing care for an illness, whether related to military service or due to post-service civilian life. Under current appropriations, access to VA medical care is available to all honorably discharged veterans. A further provision specifically for Gulf veterans allows VA to waive inpatient and outpatient copayments normally assessed certain higher-income veterans who lack an adjudicated finding that an illness is service-connected. This copay waiver applies where the Gulf veteran's illness or disability is not of obvious recent origin nor related to a birth defect.

- **Statistics.** VA tracks the utilization of its health care and compensation benefit programs by Gulf veterans. For the latest statistics, see <http://www.va.gov/pubaff/gulfvets.htm>.

- **Research.** To improve understanding of Gulf veterans' health issues, the federal government has funded 145 scientifically rigorous research projects valued at \$133.5 million. The 145 include 40 completed and 105 ongoing projects. Research findings show that Gulf-deployed veterans who were contacted in mail or telephone surveys are reporting illnesses more frequently than other veterans. Research is continuing to look for differences in objective medical tests and other clinical findings while at the same time testing possible treatments, such as a large antibiotic therapy trial now in progress. Other projects are testing various case definitions for a possible "Gulf War syndrome." This term currently is of limited value in American medicine because it does not identify a characteristic organ abnormality nor reflect consensus on any set of inclusionary or exclusionary symptoms, laboratory test results or medical signs.

- **Compensation.** VA has a special compensation authority available only to Gulf War veterans which provides criteria for monthly monetary benefits to Gulf veterans who have significant symptoms that defy conventional medical diagnoses. VA compensation also is available to veterans of any time period, including Gulf War veterans, based on findings that a serious chronic disease or disability was incurred during or aggravated by military service. This often is shown through military service medical records. For VA, an ongoing challenge is assessing the likelihood that any environmental exposures may have contributed to latent diseases, meaning diseases that would first appear after a veteran's discharge and thus would not have been evident in service records under conventional "incurred or aggravated in service" criteria. VA has contracted with an independent scientific body, the Institute of Medicine, to report on whether a higher risk of illnesses can be associated with potential Gulf exposures.

VA Response to Gulf Veterans' Concerns

Within several months of the ground war and while nearly half of the deployed troops were still in the combat theater, VA in May 1991 began work on a health-tracking program aimed at environmental issues, focusing initially on the effects of oil well fires.

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As veterans' concerns broadened, in 1992 the program became the Gulf War Registry physical examination program in place today, where every VA medical center has a specific registry physician familiar with Gulf environmental issues performing the protocol exam. Over the past eight years, Gulf registry physical examinations have been provided to more than 75,000 Gulf veterans, many of whom have no illnesses but desire the free physical examination and an opportunity to speak with a physician familiar with environmental issues. As the examination program evolved, the testing protocol was expanded, improved and adopted as a model for a similar Defense Department examination program.

VA has undertaken outreach efforts to publicize these and other medical services for Gulf veterans and VA keeps in touch with those Gulf veterans who have used VA services through newsletters featuring policy and scientific developments (see <http://www.va.gov/gulf.htm>).

Although the health examination program has been an important access point to steer ill veterans into continuing VA treatment, it is limited in providing broad answers about the health of Gulf veterans. It lacks such scientifically rigorous elements as a non-Gulf comparison group that would define a "norm" for comparison. Further, because the veterans are self-referred and are not a representative sampling, findings cannot be extrapolated to Gulf veterans in general.

By 1994, federal agencies had initiated a variety of controlled studies on Gulf War veterans' general health to provide rigorous scientific answers in such issues as death rates and causes and birth defects in the veterans' offspring. VA launched a program of new hospital-based environmental hazard research centers in January 1994.

Research Accomplishments: 1991 - 2000

Completed studies suggest that birth defects are not elevated in the families of Gulf War veterans. A VA study of death certificates shows that Gulf War veterans are dying from chronic diseases *less frequently* than a comparison group (veterans who served elsewhere). Studies analyzing inpatient records of Gulf War veterans and controls who were sick enough to be hospitalized have not demonstrated any unusual differences between Gulf veterans and the non-Gulf comparison groups. The lack of positive findings in these areas should be weighed against the natural latency of diseases such as certain cancers that may not develop for decades.

Several scientific studies surveying Gulf veterans by telephone or mail questionnaire have shown that as a group, Gulf War veterans are reporting symptoms or diseases more frequently than non-Gulf comparison groups. In sum, dozens of published studies have focused on issues ranging from toxicology of various chemicals in animals to narrow clinical hypotheses comparing groups of veterans. There is no doubt that many Gulf veterans are suffering, sometimes with undiagnosed symptoms affecting a variety of organ systems, but most health problems are treatable with conventional medical approaches while research continues.

No single, easily identified unifying diagnosis or exposure has emerged to explain the health problems experienced by some Gulf War veterans. However, early data reported at a June 1999 scientific meeting based on a large VA study's questionnaire phase found a cluster of reported symptoms that are being further explored by George Washington University (GWU) scientists in conjunction with VA researchers. This symptom cluster of interest from the National Health Survey of Gulf Veterans and their Families involves blurred vision, loss of balance or dizziness, tremors or shaking and speech difficulty. The GWU-VA study will follow up with objective physical examinations of those reporting the symptom cluster as well as multiple groups of representative controls.

The studies indicating that deployed Gulf War veterans are reporting more health symptoms than their non-deployed counterparts were undertaken by researchers at VA, DoD, the Centers for Disease Control and Prevention (CDC), as well as university researchers and scientists in Canada and Britain.

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For example, a CDC epidemiological study found multiple symptoms more prevalent in Air Force Gulf veterans compared with controls who served in areas of the world away from the Gulf War. Although 39 percent of Air Force Gulf War veterans who were still on duty and were studied by CDC suffered from chronic problems with fatigue, mood, thinking and muscle aches and pains, this was also reported by 15 percent of the non-Gulf group.

Another large CDC study of Gulf veterans compared veterans who had lived in Iowa at the time of their military enlistment to controls. The Gulf veterans reported a higher prevalence of symptoms of depression, post-traumatic stress disorder, chronic fatigue, cognitive dysfunction, bronchitis, asthma, fibromyalgia, alcohol abuse and sexual discomfort.

A University of Texas questionnaire-based study administered to 249 members of a reserve Naval mobile construction battalion suggested six possible syndromes in Gulf veterans.

New Research Frontiers

A major question for research is whether the self-reported higher rate of illness shown in questionnaire surveys can be substantiated objectively in medical examinations using conventional techniques. The major VA National Health Survey of Gulf Veterans and their Families designed to survey up to 30,000 veterans (half Gulf combat theater veterans and half controls from service in other areas) has a clinical examination component for a portion of each group. This study now is examining veterans and their family members under a uniform, comprehensive clinical examination protocol at selected sites around the country. Pediatricians examining the children of veterans are gathering data enabling a comparison of child health not only among the Gulf War theater veterans and control cohorts, but also between children in the same family born before the Gulf deployment compared to those born after the conflict.

Primary hypotheses in the National Health Survey are focusing attention on general health status as well as chronic fatigue syndrome, fibromyalgia, post-traumatic stress disorder, and neurological abnormalities. The study is expected to complete patient recruitment in May 2001. Additional work by George Washington University in evaluating the symptom cluster from the National Health Survey's early phases is a spin-off project providing an additional series of examinations specifically for those who reported a specific symptom combination.

Meanwhile, controlled treatment trials are examining the potential value of therapy for subgroups of Gulf veterans with specific combinations of symptoms. The exercise and behavioral therapy (EBT) trial is testing whether two therapeutic interventions -- exercise training and cognitive behavioral therapy -- alone or in combination improve physical function. The antibiotic treatment trial (ABT) focuses on a hypothesized infectious cause of certain symptoms experienced by Gulf veterans by evaluating outcomes from doxycycline therapy. Both the EBT and ABT trials involve random assignment of both Gulf veterans and controls to treatment or to a placebo group.

The safety of patients in clinical studies is a paramount concern to VA, as is VA's commitment to evidence-based medical treatment. The two treatment trials received extensive peer review from outside experts during their design.

Disability Compensation

Since early 1995, VA has been providing compensation payments to chronically disabled Gulf War veterans with undiagnosed illnesses. This benefit was expanded under an April 29, 1997, regulation that essentially eliminated the date of initial manifestation of latent symptoms as a consideration in adjudication through the end of the year 2001. A disability is considered chronic if it has existed for at least six months.

Outside of the new regulation, VA has long based monthly compensation for veterans on finding evidence a condition arose during or was aggravated by service. VA has approved more than 183,037 claims of Gulf veterans for service injuries or illnesses of all kinds, including 3,117 approved under the undiagnosed illnesses regulation (latest statistics at <http://www.va.gov/pubaff/gulfvets.htm>).

Independent Review of Risks and Disease Associations

VA contracted with the independent Institute of Medicine (IOM) in 1998 to provide a comprehensive evaluation and summary of available scientific information regarding the association between various exposures or combinations of exposures and the health of Gulf War veterans. The first report is due August 2000.

Based on the IOM report, VA will make a determination whether any statistical associations warrant special disability benefits to link various illnesses with specific exposures, or a "presumptive service-connection" for adjudication of claims. Such policies would be proposed through regulations. The model for this use of the IOM report is that organization's review of studies related to the defoliant Agent Orange. IOM reports have led to VA expanding compensation for Vietnam War theater veterans by providing a solid basis for presumptive service-connection policies.

Outside experts also have fostered improvements to Gulf War veteran programs over the years. Both clinical care and direction for the research agenda has been guided by both internal advisory committees as well as numerous reviews of the federal response to Gulf War veterans' illnesses by teams of scientists, veterans, physicians, public health specialists and members of Congress. Notable among the work of panels of experts were the 1994 "NIH Technology Assessment Workshop," a 1996 Institute of Medicine "Report of the Committee to Review the Health Consequences of Service During the Persian Gulf War," and the 1996 report of the Presidential Advisory Committee on Gulf War Veterans' Illnesses.

Risk Factors of Concern To Veterans

Veterans have reported a wide range of factors observed in the Gulf environment or speculative risks about which they have voiced concerns. Many are the subject of research investigations and none have been ruled out as a cause of illness. There appears to be no unifying exposure that would account for all unexplained illnesses. Individual veterans' exposures and experiences range from ships to desert encampments, and differences in military occupational specialty frequently dictate the kinds of elements to which servicemembers are exposed.

Veteran concerns include exposure to the rubble and dust from exploded shells made from depleted uranium; the possibility of exposure to the nerve agent sarin or some yet-unconfirmed Iraqi chemical-biological agent; and use of a nerve agent pre-treatment drug, pyridostigmine bromide. Many other risk factors also have been raised.

In its study of possible associations of disease and Gulf environment risk factors, the Institute of Medicine's first report is examining pyridostigmine bromide, vaccines and their components, uranium and depleted uranium, and the nerve agents sarin and cyclosarin.

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