

## **IOM: Gulf War and Health Vol. 8**

### **Update of Health Effects of Serving in the Gulf War**

#### **Key Findings: Scope and Nature**

- "that multisymptom illness [is] a diagnostic entity" (p. 204)
- "current estimates that more than 250,000 U.S Gulf War veterans have persistent unexplained medical symptoms" (p. 264)
- "that there is sufficient evidence of association between deployment to Gulf War and chronic multisymptom illness" (p. 211)

## Key Findings: Cause

"[T]he excess of unexplained medical symptoms reported by deployed Gulf War veterans cannot be reliably ascribed to any known psychiatric disorder." (p. 109)

- "In contrast to the RAC report, the Update committee found that human epidemiologic evidence was not sufficient to establish a causative relationship between any specific drug, toxin, plume, or other agent . . . and Gulf War illness. . . ." (p. 261)
- "[I]t is likely that Gulf War illness results from an interplay of genetic and environmental factors." (p. 263)

## Call for a Major Research Program

- "The committee believes that the path forward for veterans has two branches. The first is continued surveillance of Gulf War veterans." (p. 262)
- "[The second] consists of a renewed research effort with substantial commitment to well-organized efforts to better identify and treat multisymptom illness in Gulf War veterans" (p. 263).

"Given the high reported prevalence of persistent symptoms, plus the steady advances in understanding genetics, molecular diagnostics, and imaging, it is now possible to plan and carry out adequately powered studies to identify inherited genetic variants, molecular profiles of gene expression, other epigenetic markers (such as modifications of DNA structure related to environmental exposures), specific viral exposures, signatures of immune activation, or brain changes identified by sensitive imaging measures..." (p. 263)

“The committee is optimistic that a rigorous, adequately powered analysis would identify useful biomarkers that might not only be helpful for symptomatic veterans of the Gulf War but also for nondeployed veterans and for civilians with a range of medically unexplained symptoms . . .” (p. 263)

"Detailed planning with access to the very best expertise in medicine, epidemiology, toxicology, imaging, molecular biology, and clinical trials will maximize the chances of success. . . . The funding needs to support a study of this magnitude would be substantial but would also present a new opportunity to promote cooperation among different funding sources and provide high-level coordination for an important health problem." (p. 264)

“A new consortium among the VA, DoD, and National Institutes for Health (NIH) could be established for this purpose, perhaps with the participation of the private sector for drug development and clinical trials. The participation and perhaps leadership of the Clinical Translational Sciences Consortium at the NIH would also be worth exploration.” (p.264)

“The overall goal would be to provide a centrally coordinated but facile organization capable of creating an adequately powered dataset and then encouraging practical and innovative science aimed at understanding the basis of unexplained symptoms in Gulf War veterans and developing effective treatments in order to alleviate their suffering as rapidly and completely as possible.” (p. 264-265)

## Preface by chair, Dr. Stephen Hauser, UCSF

- "Veterans who continue to suffer from these discouraging symptoms deserve the very best that modern science and medicine can offer to delineate the true underlying cause of these symptoms in order to speed the development of effective treatments, cures and, it is hoped preventions." (p. x)
- "The committee suggests a path forward to accomplish these goals and we believe that, through a concerted national effort and rigorous scientific input, answers can likely be found." (p. x)

**THIS PAGE INTENTIONALLY LEFT BLANK**