



## Research Advisory Committee on Gulf War Veterans' Illnesses

### 2004 Report and Recommendations

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### Gulf War Illnesses: Highlights of Scientific Progress

The findings and recommendations of the 2004 report of the Research Advisory Committee on Gulf War Veterans' Illnesses were informed by the Committee's review of hundreds of published studies, as well as government reports and testimony from scientific experts. Significant research findings that underlie the report's key conclusions include the following:

- Multiple epidemiologic studies have indicated that 26 to 30 percent of veterans who served in the 1991 Gulf War are affected by a complex of multiple chronic symptoms—over and above expected rates seen in veterans who did not serve in the Gulf War.
- Research studies have consistently determined that wartime stress and psychiatric illness do not explain Gulf War illnesses in the large majority of ill veterans.
- Studies published in 2003 found that Gulf War veterans have developed amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease) at about twice the rate of veterans who did not serve in the Gulf War.
- Studies of different Gulf War veteran groups consistently describe similar complexes of chronic neurological symptoms (including headaches, memory problems, confusion, dizziness, blurred vision, tremors) in ill veterans.
- Multiple studies have identified objective evidence of neurological abnormalities in ill Gulf veterans using specialized brain imaging scans, tests of autonomic function, and audiovestibular and neurocognitive testing.
- Government reports indicate that a large number of Gulf War troops were exposed to a variety of potentially toxic substances during deployment, including multiple compounds—low levels of chemical nerve agents, pills taken to protect veterans from the effects of nerve agents, and insect repellants and pesticides—that can adversely affect the nervous system.
- Fifteen animal studies published since 2000 have found that, contrary to earlier assumptions, exposure to low levels of the nerve agent sarin—below doses that produce immediate problems—can result in longer-term effects on neurological and immunological function.
- Twenty-two toxicological studies published in 2000-2004 indicate that concurrent exposure to several of the toxicants encountered in the Gulf War can result in adverse effects that significantly exceed those from individual exposures.
- Epidemiologic studies consistently find higher rates of Gulf War illnesses in veterans who report taking anti-nerve gas pills, heavy use of pesticides, and possible exposure to chemical weapons.
- Population studies of Gulf War veterans have consistently found higher illness rates to be associated with vaccines received during the war.

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