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The full report is titled "Gulf War Veterans' Health: Medical Evaluation of a U.S. Cohort." It is in the 7 June 2005 issue of *Annals of Internal Medicine* (volume 142, pages 881-890). The authors are S.A. Eisen, H.K. Kang, F.M. Murphy, M.S. Blanchard, D.J. Reda, W.G. Henderson, R. Toomey, L.W. Jackson, R. Alpern, B.J. Parks, N. Klimas, C. Hall, H.S. Pak, J. Hunter, J. Karlinsky, M.J. Battistone, M.J. Lyons, and the Gulf War Study Participating Investigators.

The Health of Gulf War Veterans

What is the problem and what is known about it so far?

Veterans of the 1991 Gulf War reported various physical and mental symptoms. They sometimes reported symptoms that were poorly defined or were not limited to any 1 organ in the body. These included fatigue, joint and muscle pains, night sweats, rashes, headaches, diarrhea, and problems with thinking clearly or with memory. Few studies examined the types and frequency of medical conditions among these veterans many years after the completion of the war. In addition, no large studies compared the frequencies of persistent or chronic medical conditions among veterans who were and were not deployed during the war.

Why did the researchers do this particular study?

To see whether, 10 years after the 1991 Gulf War, certain medical conditions were more common among veterans who had been deployed to the region than among military who had not been deployed.

Who was studied?

1061 deployed and 1128 nondeployed veterans of the 1991 Gulf War. Their average age was 40 years at the time of examination. About 20% were women, and about 80% were white.

How was the study done?

The researchers identified all 693,826 troops who were deployed to the Persian Gulf area in 1991. They also identified about half (800,680) of the nondeployed troops who were in military service between September 1990 and May 1991. Between 1999 and 2001, physicians and research nurses performed detailed histories, medical examinations, and laboratory tests on a sample of these veterans. The average examination time was 12 hours over 2 days. The researchers used standard criteria to diagnose several medical and psychiatric conditions. They then compared the frequency of medical conditions that were found in deployed and nondeployed veterans.

What did the researchers find?

Of 12 medical conditions, only 4 were more common among deployed than nondeployed veterans: fibromyalgia, a condition of body pain with tender points on physical examination (2% vs. 1.2%); the chronic fatigue syndrome (1.6% vs. 0.1%); skin rashes (34.6% vs. 26.8%); and indigestion or heartburn (9.1% vs. 6.0%). High blood pressure, diabetes, hepatitis, and obstructive lung disease were not more common among the deployed veterans.

What were the limitations of the study?

The authors did not assess short-term conditions that resolved within months or a few years. Few of the people who were deployed to the Gulf region or who served in the military but were not deployed participated in the study. The authors did not report psychiatric and psychological conditions.

What are the implications of the study?

Only a few chronic physical health conditions seem to be associated with 1991 Gulf War deployment.

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