



UNITED STATES ARMY PUBLIC HEALTH COMMAND

Public Affairs Office

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Environmental Medicine Program

Mission

The Environmental Medicine Program provides professional consultative services to physicians and other public health personnel in military environmental medicine. Experts in this program evaluate potential health effects that can be anticipated from population exposures to hazards in the air, water, soil and other environmental factors.

What is Environmental Medicine?

Environmental medicine is the branch of medicine that looks at how some aspects of the environment (dust, burning trash, diesel fuels, industrial emissions, or other environmental hazards) affect human health. It also looks for the causes of health effects from the environment to better detect them and prevent or mitigate them. Environmental medicine experts use knowledge of environmental, occupational and/or preventive medicine, as well as environmental epidemiology, public health and environmental science to identify and analyze the influences that an environment may have on health. At the USAPHC, environmental medicine specialists focus on those potential health threats that are found in military garrison and deployed environments and their potential effect on military personnel and operations.

Clients

The Environmental Medicine Program addresses the needs of various customers, including public health and preventive medicine personnel, and military and Veterans Administration healthcare providers. The program focuses on population-based prevention. The program's staff cannot consult with individual patients.

Structure and Organization

The Environmental Medicine Program is one of five programs in the Occupational and Environmental Medicine Portfolio at the Army Institute of Public Health. The AIPH is a subset of the U.S. Army Public Health Command. These organizations are located at Aberdeen Proving Ground, Md. The USAPHC is a major subordinate command of the U.S. Army Medical Command.

Environmental Medicine's Products and Services

- Epidemiological studies to assess the potential association between environmental exposures and health outcomes; collaboration with other clinical and epidemiological researchers in study design and execution; and review of external studies.
- Interpretation of environmental sampling data. As one of its public health responsibilities, the USAPHC oversees the DOD data archive for the environmental sampling data collected in theaters of operation. As a part of the multi-disciplinary operations at the USAPHC, the Environmental Medicine Program has access to and helps interpret the medical implications of these data.
- Reviews of scientific literature related to deployment and health outcomes and creating summary documents.
- Design and implementation of surveillance programs related to specific environmental exposures, and input to clinical and epidemiological surveillance projects and programs.
- Development and review of medical and occupational and environmental surveillance policy based on the current scientific evidence of the associations between environmental exposures and health outcomes.
- Provider-to-provider patient consultations.
- Educational and reference materials for Service members, providers, and public health personnel
- Evaluation of clusters of health concerns at garrison locations and onsite support
- Evaluation of potential medical courses of action to better address symptoms and conditions potentially associated with environmental health-related concerns.



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Environmental Medicine's Top Initiatives

Environmental Medicine Program's primary focus area has involved addressing environmental exposures experienced during deployments, especially airborne exposures potentially associated with respiratory health concerns. Other initiatives include:

- A Clinical Consult Service. With the recent drawdown of operations, post-deployment exposure concerns are increasing. To support clinical care of deployment returnees, the Environmental Medicine Program has established the Clinical Consult Service. This provider-to-provider service for military and VA healthcare providers helps them address individual patients' military environmental exposure-related health concerns. The consultative service includes identifying available exposure data from the DOD archives and evaluating its relevance, and conducting a thorough occupational and deployment history of the individual and their concerns by telephone. This is summarized along with any recommendations and forwarded to the provider for inclusion in the medical record. Consults are provided via phone or e-mail by board-certified occupational medicine physicians.
- Review and interpretation of base-camp-specific environmental exposures in documents called Periodic Occupational and Environmental Monitoring Summaries—POEMS—for various locations in Iraq and Afghanistan.
- Organization and participation in a DOD/VA working groups to address environmental exposures and respiratory concerns from Operation Iraqi Freedom and Operation Enduring Freedom.

Environmental Medicine's Partnerships

The program supplements its expertise with multidisciplinary public health experts within USAPHC and establishes working partnerships with other federal organizations, including the Navy, Air Force, DOD Force Health Protection and Readiness, and the Veterans Administration.

Environmental Medicine's Contributions

Military personnel are increasingly concerned about the health effects of hazardous substances in their environment. On their Post Deployment Health Assessments form, many Service members note concerns about exposure to dust, burning trash, diesel fuels, industrial emissions, and other environmental hazards. The Environmental Medicine Program draws on expertise from environmental science, laboratory analysis, toxicology, medicine and other technical fields to assist in addressing these concerns.

The Environmental Medicine Program features capabilities that are unique in the Army. The program has substantial experience interpreting environmental data within its proper medical context to support providers who care for service members. This includes exposure concerns related to garrison environments and to service in Vietnam, and Operation Desert Shield/Storm, but especially Operation Iraqi Freedom, Operation Enduring Freedom and Operation New Dawn. The Environmental Medicine Program has also investigated several unique incidents during these operations that involved exposure to hazardous substances. Recent examples include chromium exposure concerns related to the Qarmat Ali water treatment plant (Iraq, 2003), sulfur dioxide exposures associated with the Misraq sulfur fire (Iraq, 2003), as well as exposures to particulate matter, dusts and smoke from burn pits at various base camps in Iraq and Afghanistan.