

U.S. DEPARTMENT OF VETERANS AFFAIRS CLINICIAN'S GUIDE TO AIRBORNE HAZARDS



EXPOSURE CONCERNS

Many Veterans and service members are concerned their health was adversely affected by environmental exposures to airborne hazards. After deployment to locations with open burn pits and other air pollution sources in Iraq and Afghanistan, some Veterans have returned with a range of mild to serious respiratory illnesses. The use of burn pits was a common waste disposal practice at military sites overseas, exposing thousands of service members to potentially harmful substances, including elevated levels of particulate matter (PM). Poor air quality (pollution) was measured at many overseas locations.

ENCOURAGE VETERANS TO PARTICIPATE IN THE REGISTRY

The Airborne Hazards and Open Burn Pit Registry (AHOBPR) is a tool to help Veterans and service members become more aware of their own health issues and to help the Department of Veterans Affairs (VA) identify health conditions possibly related to burn pit exposure during military service. Participation in the registry is voluntary. Veterans and service members can participate in the registry by completing a web-based health questionnaire about their exposures and health. Information reported by participants is maintained in a secure database, and may be used in future research studies. Participants may schedule an optional in-person clinical evaluation by a VA provider.

- Visit the registry at: <https://veteran.mobilehealth.va.gov/AHBurnPitRegistry>.
- Find steps to completing the registry at <https://www.publichealth.va.gov/docs/exposures/Registry-Steps.pdf>.

THE ROLE OF THE MEDICAL SUPPORT STAFF

Medical Support Assistants (MSAs) and Environmental Health Coordinators (EHCs) have a very important role in VA's support to Veterans with military-related health concerns. Unlike other registries, the AHOBPR does not require a Veteran or service member to have an exam. However, an optional registry-related in-person examination is available and valuable for those who have health care concerns. This foundational service can only be done at a VA facility. Here are some guidelines you should know related to the in-person examination:

- Any eligible Veteran or service member who wishes to participate in the registry may receive an optional, no cost in-person evaluation.
- Veterans and inactive reserve and Guard members may be seen for the in-person evaluation at their nearby VA medical center. Service members and active Reserve and Guard members should make an appointment with their Department of Defense healthcare provider to discuss any exposure related concerns.
- The eligible participant is not required to enroll in Veterans Health Administration (VHA) health care to receive their examination. Veterans not enrolled who wish to receive an examination may request one through their local VA medical center's EHC.
- In-person examinations scheduled specifically under the AHOBPR program are not to be billed.
- Before scheduling the in-person appointment, the MSAs should first verify that the self-assessment questionnaire was completed by using the Provider Portal (<https://vaww.ahobpr.registries.aac.va.gov/RegistrantSearch.aspx>). The access credentials are identical to your VistA log in credentials. The Veteran should be directed to complete the online portion before scheduling the exam.



THE ROLE OF THE CLINICIAN

CONDUCT AN INITIAL EVALUATION

First, assess the intensity and specific focus of concern of the individual. Patients seeking medical attention may have a variety of symptoms and exposure concerns. There are no biomarkers specific to the environmental exposure-related health concerns of Veterans who deployed to Southwest Asia, Afghanistan, or Djibouti at this time. Clinicians must rely on their own evidence based knowledge, expertise, and skills to guide a patient centered evaluation and management. For example, for an individual with chronic lower respiratory symptoms, such as wheezing, chronic cough, or dyspnea with exertion, the following may be appropriate:

- A complete blood count—to rule out anemia.
- Posteroanterior and lateral chest radiographs—to rule out significant structural abnormalities
- Pulse oximetry—to assess for hypoxia.
- Spirometry with bronchodilator—to assess pulmonary function and reversibility of bronchoconstriction. Other symptoms should be evaluated according to best clinical practices, as well.

DECIDE IF A SPECIALTY CONSULTATION IS WARRANTED

The decision to conduct specialty evaluations should be made in the context of the individual patient's concerns and symptoms, findings on initial evaluation, and the comfort level of the primary care team. The indicated specialty evaluations are considered part of the exposure evaluation and should be made available to the individual by VHA at no cost to the Veteran. Appropriate specialties may include pulmonary; ear, nose, and throat; and allergy/immunology.

Consultations may result in additional assessments, such as high-resolution chest computerized tomography (CT) scan, full pulmonary function tests, assessment of vocal cord function, cardiopulmonary exercise tests, or lung biopsy.

After local evaluation is completed, some patients may still have complex, difficult-to-diagnose or medically unexplained health concerns related to airborne hazards or other deployment-related exposures. For these patients, consultation with the War Related Illness and Injury Study Center (WRIISC) might be appropriate. WRIISC information can be found at www.warrelatedillness.va.gov.



TALKING TO VETERANS

» ABOUT EXPOSURE CONCERNS

LISTEN TO AND RESPECT VETERANS' HEALTH CONCERNS.

Airborne hazards exposure and possibly associated health risks are complex issues with many uncertainties.

TAKE TIME TO ESTABLISH TRUST AND RAPPORT.

Help Veterans make informed decisions about possible next steps and management of health concerns. Identifying areas of agreement and focusing on risk reduction and optimization of health and function may provide a constructive way forward.

REFER VETERANS WITH SERVICE-CONNECTED DISABILITY BENEFITS QUESTIONS TO VETERANS BENEFITS ADMINISTRATION.

Visit www.benefits.va.gov for more information. Claims related to burn pit exposures are handled on a case-by-case basis by the Veterans Benefits Administration.

VETERAN'S SELF-ASSESSMENT

View a Veteran's self-assessment at <https://vaww.virp.registries.aac.va.gov/>. Document an evaluation using the National Note Airborne Hazards and Burn Pit Initial Evaluation Clinical Template.



RESEARCH ON HEALTH EFFECTS OF AIRBORNE HAZARD EXPOSURES

At this time, there is conflicting and insufficient research to show that long-term health problems have resulted from airborne hazards and burn pits exposure. Some research shows higher rates of self-reported pulmonary symptoms, asthma, and unexpected conditions (e.g., eosinophilic pneumonia and constrictive bronchiolitis) among service members who deployed to Southwest Asia. Other research reports no elevation in disease or symptom reporting. It is unclear what problems deployed individuals may develop and how widespread these problems are.

In 2011, the Institute of Medicine (IOM) reviewed the scientific literature related to the possibility of adverse long-term health effects of open burn pits. The report noted U.S. Department of Defense air quality monitoring data measured levels of PM higher than generally considered safe by U.S. regulatory agencies. It also cited research linking high PM levels to cardiopulmonary effects, particularly in individuals at increased risk due to pre-existing conditions such as asthma and emphysema. The IOM concluded there is only limited evidence suggestive "of an association between exposure to combustion products and reduced pulmonary function in these populations," suggesting that the high level of fine dust and pollution common in Iraq and Afghanistan may pose a greater danger for respiratory illnesses than exposure to burn pits.

For a summary of research related to airborne hazards and burn pits exposure, go to:

<https://www.ncbi.nlm.nih.gov/pubmed/31368802>.

★ DEPARTMENT OF VETERANS AFFAIRS' ENVIRONMENTAL HEALTH PROGRAMS

VHA has a designated EHC and Clinician at each VA medical center. Some of these clinicians may be able to provide additional information about exposure concerns or deployment-related health issues. See a listing of EHCs by facility at:

www.publichealth.va.gov/exposures/coordinators.asp.

AIRBORNE HAZARDS AND BURN PITS CENTER OF EXCELLENCE (AHBPCE)

The AHBPCE was formally established in May 2019. It conducts clinical and translational research and disseminates educational products and best practices related to airborne hazards and burn pits. The AHBPCE focuses on a range of health concerns including respiratory symptoms and unexplained shortness of breath (dyspnea), among other health outcomes. Learn more at:

<https://www.warrelatedillness.va.gov/WARRELATEDILLNESS/AHBPCE/index.asp>.

LITERATURE SUMMARY

- Abraham JH, Baird CP. A Case-Crossover Study of Ambient Particulate Matter and Cardiovascular and Respiratory Medical Encounters Among US Military Personnel Deployed to Southwest Asia. *J Occup Environ Med* 54:733-739, 2012.
- Baird CP, Harkins DK, editors. Airborne hazards related to deployment. Falls Church, Virginia: Borden Institute; 2015
- IOM (Institute of Medicine). 2011. Long-term health consequences of exposure to burn pits in Iraq and Afghanistan. Washington, DC: The National Academies Press.
- King MS, Eisenberg R, Newman JH, Tolle JJ, Harrell FE, et al. Constrictive Bronchiolitis in Soldiers Returning from Iraq and Afghanistan. *N Engl J Med* 365:222-230, 2011.
- Kreiss K. Occupational causes of constrictive bronchiolitis. *Curr Opin Allergy Clin Immunol*. 2013 Apr; 13 (2):167-72.
- Morris MJ, Lucero PF, Zanders TB, Zacher LL. Diagnosis and management of chronic lung disease in deployed military personnel. *Ther Adv Respir Dis*. 2013 Aug; 7 (4):235-45.
- Rose C, Abraham J, Harkins D, Miller R, Morris M, et al. Overview and Recommendations for Medical Screening and Diagnostic Evaluation for Postdeployment Lung Disease in Returning US Warfighters. *J Occup Environ Med* 54:746-751, 2012.
- Santos SL, Helmer D, Teichman R. Risk communication in deployment-related exposure concerns. *J Occup Environ Med*. 2012 Jun; 54 (6):752-9.
- Shorr AF, Scoville SL, Cersovsky SB, Shanks GD, Ockenhouse CF, SmoakBL, Carr WW, Petruccioli BP. Acute eosinophilic pneumonia among US Military personnel deployed in or near Iraq. *JAMA*. 2004 Dec 22; 292 (24):2997-3005.
- Smith B, Wong CA, Smith TC, Boyko EJ, Gackstetter GD, Ryan MAK. Newly Reported Respiratory Symptoms and Conditions Among Military Personnel Deployed to Iraq and Afghanistan: A Prospective Population-based Study. *Am J of Epidemiol* 170:1433-1442, 2009.
- Szema AM, Peters MC, Weissinger KM, Gagliano CA, Chen JJ. New-onset Asthma Among Soldiers Serving in Iraq and Afghanistan. *Allergy Asthma Proceedings* 31:e67-e71, 2010.
- U.S. EPA. Integrated Science Assessment for Particulate Matter (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009.

VA



U.S. Department of Veterans Affairs

Veterans Health Administration

VISIT US WWW.PUBLICHEALTH.VA.GOV

★ CONNECT WITH US



SUBSCRIBE TO RECEIVE EMAIL UPDATES AT
WWW.PUBLICHEALTH.VA.GOV



FACEBOOK.COM/VETERANSHEALTH



TWITTER.COM/VETERANSHEALTH