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## **Military Burn Pits and Cancer Risk**

Although it's almost impossible to prove that burn pits cause these same health issues, this evidence suggests that the health issues reported by veterans with exposures from burn pits and other chemicals linked to their deployment are reason for concern.

Personnel at these military bases have also been exposed to other air pollutants from a combination of local and regional sources. This includes dust made up of industrial emissions and waste, as well as aircraft and ground transportation emissions that mix with soil and are spread by the wind.

## Do exposures to burn pit emissions cause cancer?

Studying the health effects of exposure to burn pit emissions is difficult. Ideally, there would be records that show who was exposed to the emissions, exactly what they were exposed to, how much exposure they had, and how long they were exposed. But in general, only indirect assessments of exposure are possible. Because of this, studies of health problems possibly linked with exposures to burn pit emissions fall into 3 main groups:

- Studies that use information about the types of pollutants found in burn pit smoke to estimate whether such exposures might cause cancer (and how likely this is)
- Studies that measure the pollutants in the air, soil, and water around burn pits to estimate exposure and cancer risk in military personnel
- Studies of the blood or body tissue of military personnel with burn pit exposure that measure the presence of pollutants known to be linked with genetic alterations

These types of exposures have also been studied in relation to health outcomes in other occupational groups, such as firefighters, and for comparison, in civilian groups without these exposures. These kinds of studies are especially important, given that cancers generally take many years to develop, and military burn pit exposures have taken place relatively recently.

### What do expert agencies say?

**In general, the American Cancer Society does not determine if something causes cancer (that is, if it is a *carcinogen*), but we do look to other respected organizations for help with examining the evidence.**

A 2011 report from the US **National Academies of Sciences, Engineering, and Medicine (NASEM)** found that there was limited/suggestive evidence of a link between exposure to combustion products and reduced lung function in the populations studied,

but there was inadequate/insufficient evidence of a link at that time between combustion products and cancer. But because some of the chemicals linked with burn pit emissions can cause cancer, and the fact that it can take many years for cancer to develop after an exposure, the authors of the report concluded that they couldn't rule out that veterans exposed to burn pit emissions are at higher risk for cancer, and they suggested that further studies should be done.

Since then, NASEM has published other reports on burn pits and possible links to other health outcomes.

Other expert organizations have not assessed the possible link between burn pit emissions and cancer directly, but they have made determinations on some of the chemicals in burn pit emissions:

- **International Agency for Research on Cancer (IARC):** IARC, which is part of the World Health Organization, has classified some of the chemical substances found in burn pit emissions as “known to be carcinogenic to humans.”
- **US National Toxicology Program (NTP):** The NTP has classified at least one chemical found in burn pit emissions (dioxin) as “known to be a human carcinogen.”

To learn more about how these organizations study and classify cancer causes, see [Determining if Something Is a Carcinogen<sup>1</sup>](#) and [Known and Probable Human Carcinogens<sup>2</sup>](#).

## **Can Afghanistan and Gulf War veterans be tested for exposure to contaminants from burn pits?**

At this time, there are no widely available, simple lab tests that can show if someone was exposed to burn pit contaminants. Because of this, the US Department of Veterans Affairs (VA) presumes that all veterans who served in certain places at certain times might have been exposed, and therefore might be eligible for certain medical benefits for service-related disabilities.

## **Benefits for exposed veterans**

Military service is associated with a range of risks, especially in war zones. Although some of these risks are unique to military occupations, others may be similar to risks in civilian occupations, but with higher exposure amounts or longer-term exposures in military settings.

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The VA will process disability compensation claims for these and other presumptive conditions for veterans who served any amount of time in the Southwest Asia theater of operations (including Iraq, Kuwait, Saudi Arabia, and several surrounding areas) from August 2, 1990, to the present, or Afghanistan, Uzbekistan, Syria, Djibouti, Egypt, Jordan, Lebanon, or Yemen from September 11, 2001, to the present.

Even if you've filed a compensation claim in the past that was denied, you can file a supplemental claim for any condition now considered presumptive.

### **The Airborne Hazards and Open Burn Pit Registry**

In 2014, the VA launched the Airborne Hazards and Open Burn Pit Registry (AHOBPR) in response to concerns about respiratory illnesses linked with exposure to burn pits, and the need to gather data on long-term health effects that may be linked with exposure to burn pit emissions. This voluntary registry will help researchers study the long-term effects of exposure to airborne hazards during deployments in Southwest Asia. For more information, go to:

<https://veteran.mobilehealth.va.gov/AHBurnPitRegistry/#page/home><sup>5</sup>, or

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Along with the American Cancer Society, other sources of information and support include:

**Department of Veterans Affairs** Toll-free numbers: Special Health Issues: 1-800-749-8387 Benefits (including disability compensation): 1-800-827-1000 Exposure to burn pits and other specific environmental hazards:

<https://www.va.gov/disability/eligibility/hazardous-materials-exposure/specific-environmental-hazards/><sup>14</sup> The PACT Act and your VA benefits:

<https://www.va.gov/resources/the-pact-act-and-your-va-benefits/><sup>15</sup>

## Hyperlinks

1. [www.cancer.org/healthy/cancer-causes/general-info/determining-if-something-is-a-carcinogen.html](http://www.cancer.org/healthy/cancer-causes/general-info/determining-if-something-is-a-carcinogen.html)
2. [www.cancer.org/healthy/cancer-causes/general-info/known-and-probable-human-carcinogens.html](http://www.cancer.org/healthy/cancer-causes/general-info/known-and-probable-human-carcinogens.html)
3. [www.cancer.org/healthy/cancer-causes/chemicals/agent-orange-and-cancer.html](http://www.cancer.org/healthy/cancer-causes/chemicals/agent-orange-and-cancer.html)
4. [www.va.gov/disability/eligibility/hazardous-materials-exposure/specific-environmental-hazards/](https://www.va.gov/disability/eligibility/hazardous-materials-exposure/specific-environmental-hazards/)
5. [veteran.mobilehealth.va.gov/AHBurnPitRegistry/#page/home](http://veteran.mobilehealth.va.gov/AHBurnPitRegistry/#page/home)
6. [www.publichealth.va.gov/exposures/burnpits/registry.asp](http://www.publichealth.va.gov/exposures/burnpits/registry.asp)
7. [www.publichealth.va.gov/docs/exposures/ten-things-to-know-fact-sheet.pdf](http://www.publichealth.va.gov/docs/exposures/ten-things-to-know-fact-sheet.pdf)
8. [www.cancer.org/healthy/find-cancer-early/american-cancer-society-guidelines-for-the-early-detection-of-cancer.html](http://www.cancer.org/healthy/find-cancer-early/american-cancer-society-guidelines-for-the-early-detection-of-cancer.html)
9. [www.cancer.org/healthy/stay-away-from-tobacco.html](http://www.cancer.org/healthy/stay-away-from-tobacco.html)
10. [www.cancer.org/healthy/eat-healthy-get-active/take-control-your-weight.html](http://www.cancer.org/healthy/eat-healthy-get-active/take-control-your-weight.html)
11. [www.cancer.org/healthy/eat-healthy-get-active/get-active.html](http://www.cancer.org/healthy/eat-healthy-get-active/get-active.html)
12. [www.cancer.org/healthy/eat-healthy-get-active/eat-healthy.html](http://www.cancer.org/healthy/eat-healthy-get-active/eat-healthy.html)
13. [www.cancer.org/healthy/cancer-causes/diet-physical-activity/alcohol-use-and-cancer.html](http://www.cancer.org/healthy/cancer-causes/diet-physical-activity/alcohol-use-and-cancer.html)
14. [www.va.gov/disability/eligibility/hazardous-materials-exposure/specific-environmental-hazards/](https://www.va.gov/disability/eligibility/hazardous-materials-exposure/specific-environmental-hazards/)
15. [www.va.gov/resources/the-pact-act-and-your-va-benefits/](https://www.va.gov/resources/the-pact-act-and-your-va-benefits/)

## References

Brown MA. Science versus policy in establishing equitable Agent Orange disability compensation policy. *Mil Med.* 2011;176: 35-40.

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<https://doi.org/10.17226/13209>.

Mallon CT, Rohrbeck MP, Haines MK, et al. Introduction to Department of Defense research on burn pits, biomarkers, and health outcomes related to deployment in Iraq and Afghanistan. *J Occup Environ Med*. 2016;58: S3-S11.

McLean J, Anderson D, Capra G, Riley CA. The potential effects of burn pit exposure on the respiratory tract: A systematic review. *Mil Med*. 2021;186: 672-681.

National Academies of Sciences, Engineering, and Medicine. Respiratory health effects

**Written by**