

## A CENTURY OF MILITARY TOXIC EXPOSURES AND PRESUMPTIVES

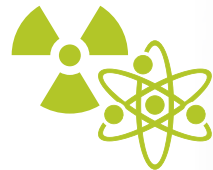
Military toxic exposures have been part of warfare for thousands of years; however, the modern history of toxic exposures dates back to World War I when there was the first wide-scale usage of chemical weapons. Over the next century, American service members have been exposed to dozens of toxic substances, both while deployed abroad and stationed at home. In response, Congress has passed laws and VA has enacted regulations to create presumptives that make it easier for veterans get access to health care and benefits, however it can take many years from the time of the exposure to the creation of a presumptive.

HISTORICAL PHOTOS COURTESY OF NATIONAL ARCHIVES

### EXPOSURES

#### Chemical Warfare

The first-large scale use of chemical weapons occurred during World War I, where mustard gas, tear gas, and chlorine were utilized, resulting in more than 1 million casualties, including an estimated 72,000 American service members.



#### Fort McClellan Toxins

Opened during WWI, Fort McClellan hosted the Army's Chemical Corps for decades, before finally closing in 1999. VA has noted that potential toxic exposures may have included radioactive compounds, chemical warfare agents, and airborne PCBs.



#### Mustard Gas Testing

During World War II, more than 60,000 service members were involved in military testing about the effects of mustard gas and lewisite exposure, as well as the effectiveness of new equipment to protect against these toxins.



#### Camp Lejeune

For almost four decades, service members and civilians living or working at Marine Corps Base Camp Lejeune, North Carolina, were exposed to drinking water contaminated with industrial solvents, benzene, and other chemicals.

#### Atomic Veterans

Following the atomic bombs at Hiroshima and Nagasaki, more than 250,000 service members were involved in cleanup and occupation activities in Japan. Over the next two decades, 400,000 more service members were exposed to atmospheric nuclear tests.

#### Agent Orange

Approximately 20 million gallons of herbicides—including Agent Orange—were sprayed over Vietnam, Cambodia, and Laos between 1962 and 1971 to defoliate the jungles, exposing millions of service members to dioxin and other toxins in Agent Orange.



#### PFAS-Contaminated Water

PFAS, known as “forever chemicals”, have been used by the military in firefighting foams on bases for decades. PFAS is also found in many other military, industrial, and household products potentially contaminating water on over 700 military bases.

#### Burn Pits and Airborne Hazards

During the first Gulf War, and in the post-9/11 wars, millions of service members were exposed to toxic fumes from open air burn pits that contained jet fuel, paints and solvents, petroleum, munitions and unexploded ordnance, medical and human waste.

#### K2 Toxins

Over 15,000 service members were deployed to Karshi-Khanabad, known as K2, a former Soviet air base in Uzbekistan, and were exposed to enriched and depleted uranium, asbestos, jet fuel, and lead-based paint.



#### Persian Gulf War (PGW) Exposures

Millions of PGW veterans were exposed to oil-well fires, depleted uranium, insecticides, burn pits, and possibly nerve agents, as well as sand and dust particles.



AP PHOTO BY JOHN GAPS III

World War I  
1917 to 1918

World War II  
1941 to 1945

Korean War  
1950 to 1953

Vietnam War  
1962 to 1973

Persian Gulf War  
1990 to 1991

Afghanistan & Iraq Wars  
2001 to 2021

### PRESUMPTIVES

#### Chronic Diseases & Chronic Constitutional Diseases (1921)

Following WWI, the federal Veterans' Bureau—precursor to the VA—established the first presumptives for “chronic diseases,” including tuberculosis and neuropsychiatric disease, as well as “chronic constitutional diseases,” including anemia, diabetes, and leukemia.

#### Tropical Diseases (1945)

Following World II, VA created a presumptive for “tropical diseases,” which initially included malaria, a disease contracted by many service members who served in the Pacific theater, and was later expanded to include cholera, dysentery, and yellow fever.

#### Former Prisoners of War (1970)

Congress passed legislation (P.L. 91-376) creating a new presumptive for former prisoners of war who served during World War II and the Korean and Vietnam wars, which initially covered beriberi, malnutrition, psychosis, and five other diseases.

#### Atomic Veterans (1985)

VA promulgated regulations to create a presumptive for “atomic veterans” involved in the cleanup and occupation of Hiroshima and Nagasaki, Japan, and later expanded to include service members involved in atmospheric nuclear testing and other radiation risk activities.

#### Agent Orange Act of 1991

Congress created a presumptive for exposure to Agent Orange for veterans who later became ill with cancers and other diseases. The law also created a new process to evaluate additional diseases using independent assessments from the Institute of Medicine.

#### Persian Gulf War I Benefits Act of 1998

Congress established a presumptive for Gulf War veterans suffering from common symptoms but unknown conditions. VA later added “undiagnosed illness,” “chronic multisymptom illness,” and “chronic fatigue syndrome” to the presumptive.

#### Camp Lejeune Contaminated Water (2017)

VA promulgated regulations creating a new presumptive for service members stationed at Camp Lejeune between 1953 and 1987, which included Parkinson's disease and seven cancers.

#### Honoring our PACT Act of 2022

The PACT Act provided the largest expansion of health care and benefits for toxic-exposed veterans in a generation. It created a new presumptive for burn pits and other airborne hazards for veterans of the first Gulf War and the post-9/11 wars in Afghanistan and Iraq.