

Wildland Firefighting Response

Deployment Health Quick-Guide

This deployment health guide provides information that can help reduce risk of injury and disease when you're deployed in response to wildfires. The Defense Health Agency (DHA) **Procedural Instruction 6490.03, Deployment Health Procedures**, requires actions to be taken pre-deployment, during deployment, and post-deployment, including Health Threat and Countermeasure Briefings.

Authority and Communication

Other federal, state, and local officials may have higher authority than your agency, and they may be coordinating the on-scene efforts.

Communicate with them, and understand how your mission fits into the response efforts.

Site Safety

Before you begin any response efforts, an on-scene safety officer should brief you about site safety and health issues. As conditions and missions change, the safety officer should provide updated information to allow for adjustments in safety measures.

Smoke Inhalation

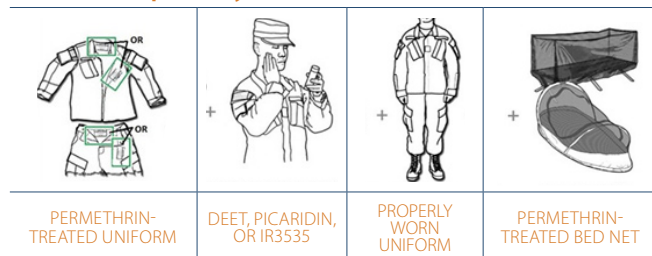
The level of smoke inhalation depends on fire intensity, closeness to the fire, your activity, weather conditions, and the terrain (smoke often fills valleys). Particulate matter (particles suspended in the air) is one of the pollutants of highest concern. Smoke levels are unpredictable, and concentrations change constantly. Practical respiratory protection requires on-site assessment.

Particles can cause temporary eye and respiratory tract irritation, with coughing and difficulty breathing. Hot smoke and gases can also burn your airways.

Insects

To reduce exposure to insects, use the Department of Defense (DoD) Insect Repellent System.

DoD Insect Repellent System



Use ALL elements for maximum protection.

Physical Injury

Heat increases the risk for accidents due to slippery sweaty palms, dizziness, and foggy safety glasses. Wherever there are hot surfaces or steam, burns are more likely. A hot environment also lowers mental alertness and physical performance. Moving debris can cause cuts, scrapes, bruises, and sprains – especially to the hands, back, knees, and shoulders. Wear leather gloves, safety goggles, and steel-toed shoes. Avoid lifts of more than 50 pounds per person. Be sure you've had a tetanus vaccination within the past 10 years and your other vaccinations are up-to-date.

Heat Stress

Heat (TB MED 507):

Physical activity in high temperatures can result in heat illness. Heat acclimatization is usually achieved within 7–14 days of physical activity. Physical activity should start slowly, with daily increases in intensity and duration.

- Follow fluid replacement and work-rest guidelines (see table). When possible, work during the cooler hours of the day.

Fluid Replacement and Work-Rest Guidelines for 4 Hours of Work

Heat Cat	WBGT Index, °F	Easy Work		Moderate Work		Heavy Work		Very Heavy Work	
		Work-Rest	Water Intake qt/hr	Work-Rest	Water Intake qt/hr	Work-Rest	Water Intake qt/hr	Work-Rest	Water Intake qt/hr
1	78° - 81.9°	NL	½	NL	¾	40/20	¾	20/40	1
2	82° - 84.9°	NL	½	50/10	¾	30/30	1	15/45	1
3	85° - 87.9°	NL	¾	40/20	¾	30/30	1	10/50	1
4	88° - 89.9°	NL	¾	30/30	¾	20/40	1	10/50	1
5	> 90°	NL	1	20/40	1	15/45	1	10/50	1

Cat: category; NL: no limit; qt/hr: quarts per hour; WBGT: wet bulb globe temperature

Easy Work = weapons maintenance, marksmanship training, drill and ceremony

Moderate Work = patrolling with a 30-pound load, low and high crawl, digging a defensive position

Heavy Work = patrolling with a 45-pound load, 4-person litter carry (180 pounds), jogging 4 mph

Very Heavy Work = 2-person litter carry (150 pounds), move under direct fire, obstacle course

- Do not skip meals.
- Get medical attention for heat cramps, -exhaustion, -injury, or -stroke.* Becoming a heat casualty increases the likelihood of subsequent episodes.
- Use sunscreen.

*Exertional heat stroke is a medical emergency; victims must be evacuated immediately. Victims may be confused or aggressive, sweaty, or may have dry, hot, red skin.

Learn more about heat illness prevention.

Personal Protective Equipment (PPE)

The personal protective equipment (PPE) required depends upon your role. Some PPE items may not be standard issue for U.S. military personnel. An advance echelon team will validate what you need to bring. **The National Interagency Fire Center** provides services and PPE (**NIFC Military Use Handbook 2021 Exhibit 3**).

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Chemicals of Concern

Wildland firefighters may be exposed to various components of wildfire smoke, including particulate matter, aldehydes, carbon monoxide (CO), nitrogen oxides, sulfur dioxide, metals, and polynuclear aromatic hydrocarbons. Exposure to these chemicals may result in shortness of breath; headaches; eye, nose, and throat irritation; sore throat; and coughing.

Gasoline- or diesel-powered equipment used in firefighting, basecamp operations, and clean-up operations produces CO. Never operate this type of equipment indoors without proper ventilation.

CO concentrations from wildfires generally do not pose a significant hazard, except for operations very close to the fire line. At least one member of each team on the fire line should wear a CO monitor. Symptoms of low-level CO exposure include shortness of breath, mild nausea, and mild headaches. If you suspect CO exposure, move to fresh air immediately, and seek medical attention.

Hazardous Materials

Fires may damage tanks, drums, and pipes containing hazardous materials. Contact the local fire department or hazardous materials team before moving unidentified containers. In contaminated areas, wear protective clothing and respirators. Wash exposed skin areas frequently.

Unstable Structures

Fire-damaged walkways, parking lots, roads, and buildings can be dangerous. Don't work around any fire-damaged building until it has been certified safe by an engineer or architect. Assume all structures are unsafe until they are inspected. Leave at once if shifting or noise signals a possible collapse.

Confined Spaces

Never enter a confined space—even to rescue a fellow worker!—unless you have been properly trained. Call 911 for help.

If you are properly trained and have the necessary equipment to enter a hazardous confined space, consider other hazards. Molding or fermenting agricultural materials in confined spaces may generate large amounts of toxic gases, which could cause lung damage or death if inhaled.

Turn on ventilation in silos and other storage areas at least 30 minutes before entering, and leave it on while you're working.

Electrical Hazards

Never handle a downed power line. If you must work near one, contact the utility company to de-energize and ground or shield it. Smoke, which obscures electrical lines and equipment, can also become charged and conduct electrical currents.

If there has been water anywhere near electrical circuits and electrical equipment, turn off the power at the main breaker or fuse on the service panel. Do not turn the power back on until electrical equipment has been inspected by a qualified electrician.

Displaced Animals

Stress can change the temperament of friendly pets. Wild and domesticated animals may seek shelter in unusual places.

Do not handle displaced animals. Do not keep them as pets or mascots. Contact animal control specialists for help. If you've been bitten or scratched, you should wash the wound(s) immediately with soap and water, and contact a healthcare provider.

Hazardous Plants

If touched, some plants can irritate the skin; if burned, they can irritate the skin and lungs. Avoid contact with plants when possible, or wash contaminated skin and clothing after contact. "Leaves of three – let them be."

Supply Information


Item	NSN
Sunscreen Lotion	Sunscreen Lotion
Non-alcohol Lotion Base Sunscreen	6505-01-267-1486
DEET Insect Repellent	DEET Insect Repellent
20% Picaridin Insect Repellent Pump Spray	6840-01-619-4795
IR3535 Insect Repellent Pump Spray	6840-01-656-7707
Hearing Protection - Sound Guard Earplugs	*
Eye Protection	**

* Department of the Army Pamphlet (DA PAM) 40-501, Table 7-3

** Authorized Protective Eyewear List (APEL®)

Military Vaccine Requirements

Refer to DHA's [Immunization Healthcare Division](#) for up-to-date vaccine requirements.

 Scan the QR code for more information.

Defense Centers for Public Health - Aberdeen

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