What to Know About Fuel Exposure in Veterans

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Military personnel are frequently exposed to fuels during deployment, chiefly diesel, JP-5, and JP-8. Fuel may be inhaled, absorbed through the skin, or accidentally swallowed. The effects of this fuel exposure on veterans are unpredictable and not fully investigated.

Your side effects following deployment might include mild or serious health problems later.

What Is Fuel Exposure?

Uses of fossil fuels are necessary during military training and action. Exposure to fuels is common and can be prolonged during deployment.

Types of fuel commonly used are diesel (for land vehicles), JP-5, and JP-8 (for aircraft).

The duration of exposure is important in determining the health effects. Your age at the time of exposure, genetics, gender, dietary habits, and other habits also play a part in fuel exposure effects. Prolonged and high-level exposure to fuels can cause several immediate and long-term disorders.

The effects of vehicle emissions are well-known and result from the products of fuel combustion. F:he same thing. It refers to the effects of breathing in fuel vapors, having fuel splashed on your skin, or the accidental drinking of fuel.

Three types of fuel are used for military vehicles.

Diesel. It is a fossil fuel obtained by the distillation of crude petroleu for ground vehicles. It contains several types of hydrocarbons.

JP-8 (Jet Propulsion). This is a fuel derived from kerosene with specific additives for military use. A corrosion inhibitor/lubricity improve (CI/LI), fuel system icing inhibitor (FSII), and a static dissipater additive (SDA) are added during the manufacturing process. Some JP-8 may also have a metal deactivator and an anti-oxidant.

JP-5. This is also an aircraft fuel. Its handling and safety characteristics make it more suitable for aircraft carriers. This is the fuel predominantly used by the US Navy. Personnel often work on aircraft in enclosed spaces below decks. Vapor concentrations can be high in such spaces.

Though JP-5 and JP-8 fuels are fuels optimized for aircraft, the navy also uses them for land vehicles like tanks, trucks, and jeeps. This is done to reduce the requirement for different types of fuels.

Jet Fuel Exposure in Veterans

Jet fuel exposure (JP-5 and JP-8) during active duty is frequent. These fuels are kerosene-based and contain various volatile compounds, so high-level exposure to fuel vapors while working in hangars can be harmful.

Jet fuel exposure can happen to navy personnel too. Ships are often used to transport jeeps, armored tanks, tanker trucks, trailers, and helicopters. These are stored in the ship's cargo holds, where vapors can build up. Personnel working in such environments are at risk for fuel exposure.

Diesel Exposure in Veterans

Diesel is used to power most land vehicles in military use. Diesel vapors contain several hydrocarbons, and concentrations can reach dangerous levels in closed spaces like garages.

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Fuel Exposure — Military

- Eye irritation
- Skin irritation
- Fatigue
- Breathing difficulty
- Throat irritation
- Headache
- Dizziness
- Sleep disturbances

The most dangerous effects are associated with drinking fuel. This may result in convulsions (seizures), coma, and even death.

The severity of the symptoms is typically determined, though, by how much fuel you were exposed to and for how long. If you had symptoms at the time of exposure, you are more likely to have long-term health problems.

Fuel Exposure Long-Term Health Effects

Effects on the blood. The vapors of fuels contain benzene, a hydrocarbon. It can cause blood disorders like aplastic anemia and leukemia. Aplastic anemia is a condition in which your bone marrow is suppressed and cannot make red blood cells, white blood cells, and platelets.

Effects on the brain and nervous system. All fuels generate hydrocarbon vapors. These are central nervous system depressants and can cause asphyxia or unconsciousness at high concentrations. Low concentration exposure can cause euphoria, disorientation, confusion, giddiness, tremor, and seizures. Recovery is rapid and complete after timely removal from the exposure.

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Fuel leaks in the cockpits of airplanes are particularly hazardous as the concentration can become very high. Pilots with such exposure have staggering gait, slurred speech, muscular

in a few days.

Personnel working on vehicles or aircraft in closed spaces are likely to have long-term exposure to fuels. Chronic nervous system symptoms reported are depression, sleep disturbances, poor memory, headache, dizziness, and tiredness. Work performance is a

Effects on the heart. Hydrocarbons in fuel vapors can cause sudden death by inducing disturbances of heart rhythm (arrhythmias). Benzene and heptane in fuel vapors are the most likely to cause such effects.

Fuel exposure and cancer. Prolonged exposure to fuels may lead to a slightly increased risk of kidney cancer. Other cancers do not seem to be more common in people working with high-level fuel exposure.

Effects on the skin and eyes. Diesel has the potential to irritate the skin. The other fuels do not ordinarily damage the skin. None of the fuels cause eye damage.

Veteran Health Problems

If you believe you have health problems acquired during active duty, you can get care from Veterans Administration Health Care. If you were exposed to environmental hazards during military service, the VA provides health care. You may be referred to the War Related Illness and Injury Study Center for evaluation and clinical treatment.

You can also apply for disability benefits from the Veterans Administration eBenefits website.

Show Sources

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