

NAPHTHA EXPOSURE IN NAVY AVIATION:

SHORT- AND LONG-TERM HEALTH EFFECTS

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Naphtha is a petroleum-based solvent widely used in U.S. Navy aviation maintenance for cleaning aircraft components, degreasing metal parts, thinning paints, and preparing surfaces for sealants or adhesives. It evaporates quickly, creating a high risk of inhalation exposure in confined workspaces such as hangars, fuel cell areas, and maintenance bays.

Naphtha contains a mixture of hydrocarbons, including alkanes, cycloalkanes, and aromatic compounds that can irritate the respiratory system and affect the nervous system.

SHORT-TERM (ACUTE) EFFECTS OF NAPHTHA EXPOSURE

1. Respiratory and Airway Irritation:

- Burning or irritation of the nose and throat
- Coughing
- Chest tightness
- Shortness of breath

Effects worsen in poorly ventilated spaces.

2. Neurological Symptoms:

Naphtha vapors depress the central nervous system.

Symptoms may include:

- Headache
- Lightheadedness or dizziness
- Fatigue
- Confusion or impaired coordination
- Nausea

High concentrations may cause fainting.

3. Skin and Eye Irritation:

- Redness, dryness, and cracking of skin
- Dermatitis from repeated exposure
- Burning or watery eyes

Naphtha dissolves natural skin oils, increasing susceptibility to chronic irritation.

4. Gastrointestinal Effects (rare but possible):

- Nausea
- Vomiting
- Chemical pneumonia if aspirated during accidental ingestion

5. Fire Risk Exposure:

Naphtha is highly flammable. Workers may have been exposed to secondary hazards such as smoke or fumes from accidental ignition.

LONG-TERM (CHRONIC) EFFECTS OF NAPHTHA EXPOSURE

1. Chronic Neurological Effects:

Repeated exposure may lead to:

- Memory difficulties
- Reduced concentration
- Chronic headaches
- Mood disturbances (irritability, anxiety)

2. Peripheral Neuropathy:

Long-term hydrocarbon exposure can contribute to:

- Numbness or tingling in extremities
- Burning sensations
- Coordination issues

3. Chronic Respiratory Problems:

Long-term effects may include:

- Persistent cough
- Airway hyperreactivity
- Worsening asthma
- Decreased lung function

4. Dermatological Conditions:

Chronic exposure causes:

- Persistent dermatitis
- Skin thickening or cracking
- Chemical sensitivity

5. Liver and Kidney Stress:

Prolonged exposure to hydrocarbons like naphtha may cause:

- Mild liver enzyme elevation
- Kidney irritation

Although severe organ damage is uncommon, chronic mild dysfunction is documented in high-exposure occupations.

6. Carcinogenic Concerns:

Naphtha is not classified as a proven carcinogen, but some forms contain trace aromatic hydrocarbons (like benzene), which increase cancer risk with long-term exposure.

NAVY AVIATION ROLES AT HIGHEST RISK

- Aviation Structural Mechanics (AM)
- Aviation Machinist's Mates (AD)
- Aviation Electronics Technicians (AT)
- Corrosion control and paint technicians
- Fuel system and fuel cell maintenance personnel
- Airframe repair specialists

- Depot-level artisans

Confined maintenance spaces significantly increase exposure risk.

VA DISABILITY CLAIM WRITEUP EXAMPLE

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****Statement in Support of Claim: Naphtha Exposure – Navy Aviation****

I am submitting this statement in support of my claim for service-connected disability resulting from prolonged exposure to naphtha-based cleaning solvents during my service in the United States Navy.

From [YEAR] to [YEAR], I served as an Aviation [RATE/MOS] assigned to the USS [SHIP] and multiple naval air stations. My responsibilities included corrosion control, surface preparation, parts cleaning, and sealant removal, all of which required the routine use of naphtha. This solvent was used daily for degreasing metal components, cleaning sealant residue, and preparing aircraft parts for inspection or painting.

During my service, proper ventilation and protective equipment such as respirators and chemical-resistant gloves were not consistently provided. As a result, I frequently inhaled naphtha vapors and experienced immediate effects including headaches, dizziness, throat irritation, nausea, and episodes of impaired coordination while working in enclosed maintenance spaces.

Since leaving the Navy, I have continued to experience chronic health issues consistent with long-term exposure to industrial solvents, including persistent headaches, memory and concentration difficulties, chronic skin irritation, and ongoing respiratory discomfort. Medical evaluations have documented [NEUROPATHY / CHRONIC DERMATITIS / CHRONIC RESPIRATORY CONDITION / OTHER], which align with known long-term effects of hydrocarbon solvent exposure such as naphtha.

Given the nature of my duties, the lack of adequate protective measures, and the well-established health risks associated with naphtha exposure, I believe my current conditions are directly related to my military service. I respectfully request that the VA recognize this disability as service-connected.

Signed,

[Veteran Name]

[Date]