

Healthcare Professionals: Red Hill Jet Fuel Exposure– Clinical Awareness and Guidance



RedHillRegistry.org

In November 2021, the Red Hill Bulk Fuel Storage Facility leaked JP-5 jet fuel into the O’ahu water supply. The result was that 93,000 individuals were exposed via ingestion, inhalation, and skin contact. Exposure disproportionately impacted military families and local communities.

Healthcare professionals play a pivotal role in preventing and addressing adverse health outcomes following an environmental crisis.

We thank you for your support of the Red Hill community.

The Assessment of Chemical Exposure (ACE) studies were conducted by the Centers for Disease Control and Prevention Agency for Toxic Substances and Disease Registry (CDC/ATSDR) in partnership with the Hawai’i State Department of Health (HDOH) **to investigate the immediate health effects of the water contamination. Data show that many individuals experienced new or worsened health problems following exposure, with symptoms reported across multiple body systems.** Many participants continued to experience symptoms for more than 30 days after the initial exposure, indicating potential for long-term health impacts. **These findings underscore the need for ongoing clinical monitoring and care informed by environmental exposure.**

Key Clinical Findings (CDC/ATSDR ACE Studies)

ACE 1 - Initial Community Health Survey (Jan–Feb 2022; n=2,289 participants) [1]

- Self-administered survey: 87% reported symptoms
- Most affected systems: neurologic, gastrointestinal, dermatologic

ACE 2 - Follow-Up Survey (Aug–Sept 2022; n=986 participants) [2]

- 80% had persistent symptoms; 55% reported worsened physical health
- 65% were confident their symptoms were related to jet fuel exposure
- 50% reported worse mental health after the exposure compared to before

ACE 3 - Medical Record Review (Nov 2021–Feb 2022; n=653 records) [3]

- 55% had worsening preexisting or persistent new conditions or symptoms
 - Most-documented symptoms involved neurologic, mental, and dermatologic systems

**Red Hill Jet
Fuel Exposure:
What We Know About
Health Effects Fact Sheet**



Systematic Literature Review: Health Effects of Kerosene-Based Jet Fuels [4]

A recent systematic review of 28 articles on the health effects of kerosene and kerosene-based jet fuels found:

- No long-term longitudinal studies of the health effects of kerosene or jet fuels.
- Fuels are associated with respiratory, neurological, gastrointestinal, and dermatological outcomes.
 - Respiratory effects were frequently observed following acute ingestion of kerosene.
 - Neurological health outcomes were commonly observed in individuals with chronic occupational exposure to jet fuel, particularly through dermal and inhalation routes.
- The limited number of analytical studies available, combined with the lack of consistency in exposure and outcome variables, challenges the drawing of meaningful conclusions.



How Healthcare Professionals Can Support Exposed Individuals

Support Patient Advocacy

Patients are seeking validation of their health concerns. You can:

- Encourage patients to document symptom onset and progression.
- Patients may present with multi-system, non-specific, or persistent symptoms. Document all of their concerns.
- Ask about possible environmental exposures when symptoms are unexplained.
- Use respectful, trauma-informed approaches [5].



Patient Self Advocacy Fact sheet

SAMHSA Guidelines on Trauma-Informed Care



Take an Exposure History

Record any times the patient has come into contact with the material or place. Review ATSDR's guidance on how to take an exposure history. Specifically noting the patient's past residential, work, and even school location history could be vital to their future health [3,5].



ATSDR's Exposure History Guidance

Consider Whether a Referral to a Specialist is Needed

Refer patients to other health experts who are equipped to help the patient with what they need. Assist patients in navigating other resources available to them. Knowing when and to whom to refer patients is critical to patient experience [3].

Why HCP Education Matters

As a healthcare professional, you are essential in:

- Validating patient experiences.
- Providing informed, compassionate care.
- Connecting patients with relevant resources.

Help close knowledge gaps on health effects of jet fuel exposure, improve outcomes, and support trauma-informed, equitable care for affected communities.

Join the Red Hill Registry

Individuals who experienced the Red Hill water crisis can enroll in the registry at redhillregistry.org.



Contact Information

Email: info@redhillregistry.org

Website: redhillregistry.org

Social Media: @RedHillRegistry



References:

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- [4] Carvajal, V., Ng, B., Rosendaal, N., & Pirkle, C. M. (2025, August 13). A systematic review of human studies assessing the health effects of kerosene-based jet fuels and products across diverse populations and settings [Preprint]. *medRxiv*. <https://doi.org/10.1101/2025.08.12.25333531v1>
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