

Fentanyl and Carfentanil Exposures in First Responders

Summary

The risk of significant opioid exposure is minimal for first responders who encounter fentanyl, carfentanil or other fentanyl analogs in the field. The evidence suggests that limited precautions, such as nitrile gloves, provide sufficient protection from harm. Use of excessive protective equipment could delay patient care and prevent first responders from performing their duties well.

Background

Fentanyl and fentanyl analogs, such as carfentanil, are very powerful opioid drugs sometimes found in or sold as heroin, leading to accidental overdoses. First responders have concerns about the risk associated with performing their duties when these drugs may be involved. The Drug Enforcement Agency and the National Institute for Occupational Safety and Health have warned of potentially significant harm and suggested protective equipment. Anecdotal reports suggest minimal exposure while performing normal duties can cause dizziness or feeling like one's body is "shutting down." However, no reports have yet involved clinical effects consistent with a significant opioid poisoning. The evidence to date indicates there is minimal risk to first responders encountering patients who have overdosed on these substances or encountering situations involving small amounts of the drugs. First responders need to balance safety with mobility and efficiency.

Risks

Risks from inhalation, skin exposure and eye exposure are all **minimal**.

- **Inhalation:** Even in circumstances involving manufacturing of fentanyl and analogs, nearly 200 minutes of exposure is required to reach a starting dose of fentanyl. It is extremely unlikely a significant exposure would occur in a first responder.
- **Dermal:** Therapeutic fentanyl patches intended for skin absorption require prolonged contact time, an occluded area and a delivery system. Short exposure to powder which is then brushed or washed off with water would be extremely unlikely to lead to significant absorption. **Note:** *Alcohol hand sanitizers will not remove the drug and may increase absorption.*
- **Ocular:** Eye contact is unlikely, but should be avoided.

Treatment

Naloxone is indicated only for a patient who has **respiratory depression**—a patient breathing very slowly or not at all. These patients will also be **unarousable or unconscious**. Although limited information is available related to fentanyl and its analogs, animal data suggest humans should respond to naloxone in these cases. Note that large doses, greater than 10 mg, are unlikely to be helpful.

Hotline Call Center & Administrative Office:

Northern New England Poison Center
22 Bramhall Street
Portland, ME 04102
Hotline: 1-800-222-1222
Admin: (207) 662-7222 • Fax: (207) 662-5941

New Hampshire Education Office:

NH Department of Health & Human Services
29 Hazen Drive
Concord, NH 03301
Phone: (603) 770-7954

Vermont Education Office:

University of Vermont Medical Center
Community Health Improvement
128 Lakeside Avenue, Suite 106
Burlington, VT 05401
Phone: (802) 847-2392 • Fax: (802) 847-6545

Recommendations

Standard precautions are reasonable, despite limited data.

- **Recognize opioid effects:**
 - Drowsiness (naloxone **NOT** indicated)
 - Pinpoint pupils (naloxone **NOT** indicated)
 - Respiratory depression (naloxone indicated)
- **Dermal protection:**
 - Use nitrile gloves for routine handling (evidence processing)
 - Wear coveralls in heavily contaminated areas
- **Eye protection:**
 - Safety goggles/glasses if face splashing is expected (unlikely)
- **Respiratory protection:**
 - N95 or P100 **ONLY IF** there are significant amounts of powder in the air (unlikely)
- **After skin or eye exposure:**
 - Wash with large amounts of water if the skin or eyes are exposed
 - Do not use hand sanitizer

Adapted from the ACMT/AACT position statement “Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders,” clintox.org/resources/position-statements

Precautions for First Responders Encountering Fentanyl or Fentanyl Analogs

- **Recognize opioid effects:**
 - Drowsiness (naloxone NOT indicated)
 - Pinpoint pupils (naloxone NOT indicated)
 - Respiratory depression (naloxone indicated)
- **Dermal protection:**
 - Use nitrile gloves for routine handling
 - Wear coveralls in heavily contaminated areas
- **Eye protection:**
 - Safety goggles/glasses if face splashing is expected
- **Respiratory protection:**
 - N95 or P100 ONLY IF there are significant amounts of powder in the air
- **After skin or eye exposure:**
 - Wash with large amounts of water if skin or eyes are exposed
 - Do not use hand sanitizer

Questions? Call the Northern New England Poison Center – 1-800-222-1222

3" x 5" wallet card