

Fentanyl Safety for First Responders*

BACKGROUND :

Fentanyl is a powerful synthetic opioid 50 to 100 times more potent than morphine.¹ As little as two milligrams, about the size of 5 grains of salt, can cause negative health effects including trouble breathing, dizziness, and possible overdose.



There are 42 known illicitly manufactured fentanyl analogs on the market.² Fentanyl has been detected in counterfeit pills, powder, blotter paper, heroin, cocaine, crack cocaine, and crystal methamphetamine³. Fentanyl can be swallowed, snorted, injected or absorbed in the mouth with a blotter paper.¹ While some users may seek fentanyl products, some users and sellers may not be aware that their substances contain fentanyl.

Because of fentanyl's strength and increasing prevalence,^{4,5} there is growing concern about fentanyl exposure for first responders and others who might be potentially exposed. **To date, there have been no documented nor confirmed cases of overdoses among first responders in North Carolina through occupational exposure via routine duties.**

First responders can protect themselves from fentanyl exposure by:

1. Knowing the risks of fentanyl exposure
2. Taking appropriate precautions when fentanyl might be present
3. Knowing the signs of fentanyl intoxication, and having naloxone readily available

What are the risks of fentanyl exposure for first responders?

A first responder can be exposed to fentanyl in one of five ways: skin contact, inhalation, ingestion, contact with a mucous membrane (eyes, nose, etc), or with a needlestick. The most likely way for a first responder to be exposed to fentanyl is through brief skin exposure. For skin exposure, clinical toxicology experts⁶ state:

“The risk of clinically significant exposure to emergency responders is extremely low.”

Skin exposure is not expected to lead to toxicity due to its extremely poor penetration of the skin barrier, and symptoms of intoxication from skin exposure are unlikely. If your skin is exposed to fentanyl, you should wash the area with water as quickly as possible. **Do not use alcohol based hand sanitizers or bleach; they do not effectively wash opioids off skin and may increase skin absorption of fentanyl.**

First responders are unlikely to be exposed through the other four methods of exposure (inhalation, ingestion, contact with a mucous membrane, or a needlestick) if they are following good practice and using universal precautions. Situations involving large amounts of fentanyl, such as a laboratory raid that puts significant powder into the air, is a very rare occurrence. If you have been exposed to fentanyl and develop symptoms of fentanyl intoxication (see below), contact the **Carolina Poison Control 1-800-222-1222** and follow any additional protocols from your agency regarding reporting.

What should first responders do when fentanyl might be present?

Conduct a risk assessment for the presence of fentanyl

- Is a person unconscious and the cause unknown?
- Are suspected drugs or paraphernalia visible?
- What is the form and volume of suspected drugs?

During the assessment assume any white powder is fentanyl.

If the presence of fentanyl or any synthetic opioid is suspected, after addressing the immediate health needs of individuals at the scene, personnel should contact the appropriate officials within their agency who have been trained to handle hazardous materials, or contact the nearest SBI or DEA field office for assistance.

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Centers for Disease Control and Prevention (CDC) Recommends²:

- Do not eat, drink, smoke, or use the bathroom while working in an area with known or suspected fentanyl.
- Do not touch your eyes, mouth, or nose after touching any surface potentially contaminated with fentanyl.
- Field testing fentanyl or its analogs is not recommended because it increases the risk of exposure to responders.
- Avoid performing tasks that may cause fentanyl to become airborne, including handling and field testing. Activities that cause fentanyl to become airborne require higher levels of Personal Protective Equipment (PPE) and should be conducted by appropriately trained personnel and in accordance with agency policies and procedures.
- Wash hands with soap and water immediately after a potential exposure and after leaving a scene where fentanyl is known or suspected to be present to avoid potential exposure and to avoid cross contamination.
- Do not use hand sanitizers or bleach solutions to clean contaminated skin.

What are the symptoms of fentanyl intoxication?

The symptoms of fentanyl intoxication include:

- Respiratory distress, respiratory depression or arrest
- Drowsiness
- Dizziness
- Disorientation
- Pinpoint pupils
- Loss of consciousness
- Nausea/Vomiting

First Responder QUICK TIPS

- Wear gloves when handling narcotics.
- Do not open packaged narcotics.
- Do not field test unknown substances.
- Use soap and water rather than hand sanitizer.



Naloxone is the antidote for opioid overdose. First, **call 911** or request medical assistance. Naloxone should be administered to a person with signs of opioid overdose, such as a person whose breathing has slowed down or stopped or a person losing consciousness. Naloxone can be administered via intramuscular/intravenous injection or through the nose with nasal naloxone.

Due to the potency of fentanyl, a person may need multiple doses of naloxone until breathing has returned to normal. Those who do not improve with naloxone should receive airway support.

If a healthcare worker or first responder has symptoms, please call Poison Center 1-800-222-1222 for additional instructions and reporting of incident.

References:

- 1 Fentanyl. National Institute on Drug Abuse. NIH. Accessed September 19, 2017. <https://www.drugabuse.gov/publications/drugfacts/fentanyl>
2. Fentanyl: Preventing Occupational Exposure to Emergency Responders. The National Institute for Occupational Safety and Health (NIOSH). CDC. Accessed September 19, 2017. <https://www.cdc.gov/niosh/topics/fentanyl/risk.html>
3. NC SBI Crime Lab. Personal Communications November 2017
4. Fentanyl: The Next Wave of the Opioid Epidemic. Debray Houry, M.D., Director National Center for Injury Prevention and Control, CDC, U.S. Department of Health and Human Services (HHS). Accessed September 19, 2017.
- 5 The First Count of Fentanyl Deaths in 2016: Up 540% in Three Years. Accessed September 19, 2017. <https://www.nytimes.com/interactive/2017/09/02/upshot/fentanyl-drug-overdose-deaths.html?mcubz=1>
- 6 American College of Medical Toxicology (ACMT) & American Academy of Clinical Toxicology (AACT). Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders. Accessed September 19, 2017. http://www.acmt.net/_Library/Fentanyl_Position/Fentanyl_PPE_Emergency_Responders_.pdf
- 7 Opioid Overdose Toolkit. Substance Abuse and Mental Health Services Administration (SAMHSA). Accessed September 19, 2017. https://store.samhsa.gov/shin/content/SMA13-4742/Overdose_Toolkit_2014_Jan.pdf

***For the purpose of this document, the term “fentanyl” refers to illicit fentanyl (non-pharmaceutical), including compounds that contain fentanyl, which are known as fentanyl analogs.**

