

The logo for AFSCME Health & Safety Fact Sheet features the text "AFSCME" in a large, bold, white sans-serif font, with "Health & Safety Fact Sheet" in a smaller, white sans-serif font below it. The text is set against a blue background with a green horizontal bar at the bottom. To the right of the text is a stylized graphic of a star with several curved lines trailing off to the right, suggesting motion or a signal.

AFSCME

Health & Safety Fact Sheet

PROTECTING FIRST RESPONDERS FROM EXPOSURE TO FENTANYL

This document establishes interim guidance for first responders who may be exposed to fentanyl and other related substances while on the job.¹ There is a significant threat to first responders who may encounter fentanyl and other related substances through routine job activities. The National Institute for Occupational Safety and Health (NIOSH) has identified the following job categories as positions where responders might come into contact with fentanyl or its analogues.

- **Pre-Hospital Patient Care:** Emergency medical services providers, including first responders, fire department and private companies who attend to individuals with suspected fentanyl overdose. Responders may encounter drugs or drug paraphernalia on or near the patient.
- **Law Enforcement:** Law enforcement officers who perform day-to-day law enforcement duties. Law enforcement officers may come into contact with fentanyl during the course of their daily activities such as traffic stops, apprehending and searching subjects, and responding to fentanyl overdose calls. Although not recognized by NIOSH, we know from experience that Corrections personnel may encounter contraband fentanyl.
- **Investigation and Evidence Handling:** Law enforcement personnel who conduct investigations related to fentanyl. Activities may include executing search warrants and collecting, transporting, and storing evidence. Evidence collection activities in the field have the potential to aerosolize powders. Also, law enforcement personnel who handle evidence in the chain of custody have the potential to encounter fentanyl unless controls are in place to prevent exposures.
- **Special Operations and Decontamination:** Workers who conduct special operations where exposure to large amounts of fentanyl are expected. Examples include hazardous material incident response teams responding to a release or spill, and law enforcement officers executing search warrants on opioid processing or distribution sites, or participating in other tactical operations. These activities may aerosolize powders.

Illicit Use

- Fentanyl is 50 times more potent than heroin and is often mixed with heroin to increase potency. It has also been sold as a substitute for as heroin so dealers and buyers may not know exactly what they are selling or using. Fentanyl is also sold and used as a standalone drug.

¹ Interim guidance for PPE are based on the reported toxicity and chemical structure of fentanyl, and the basic principles of industrial hygiene. Standard safe work practices must to be applied to all operations where fentanyl or its analogs are known to be present.

Routes of Exposure

Fentanyl can be inhaled in powder form, orally ingested through pills, mixed with liquid and injected and rapidly absorbed both orally and through the skin using blotter paper and patches. Due to the high potency of fentanyl and fentanyl-related substances, exposure to small quantities can cause serious negative health effects, respiratory depression and even death. Do NOT use alcohol-based hand sanitizer or chlorine-bleach to clean contaminated skin as they may enhance skin absorption of fentanyl.

Worker Training

Responders who perform jobs where fentanyl or its analogues are reasonably anticipated to be present should receive special training in conducting an on-scene risk assessment related to fentanyl and its analogues and demonstrate an understanding of the following:

- How to recognize the form and determine the quantity of the suspected fentanyl and other drugs.
- When to use Personal Protective Equipment (PPE); what PPE is necessary; how to properly put on, use, take off, properly dispose of, and maintain PPE; and the limitations of PPE.
- What the potential exposure routes are for fentanyl and its analogues.
- How to recognize the signs and symptoms of opioid exposure.
- When and how to seek medical help.

Scene Risk Assessment

First responders should determine the risk level based on a scene risk assessment of the specific mission responsibilities and work environment that include the presence of hazards and the likelihood of exposure. Do not conduct field tests when fentanyl substances are suspected. Upon arrival, personnel should carefully examine the environment and situation before proceeding. This risk assessment should consider:

- The available information regarding the potential presence of synthetic opioids;
- The first responder's duration of exposure to materials;
- Person is unconscious and cause is unknown;
- Form of drugs exposed e.g. pill vs powder; and
- Packaging of drugs present on the person e.g. pill containers, folded pieces of paper.

Personal Protective Equipment

The following table provides PPE recommendations for protection against fentanyl and its analogues. Identifying the PPE appropriate for the risk is done by first selecting the correct job category, as defined above, and then the level of exposure anticipated. Exposure levels are defined as follows:

- **Minimal:** Response to a situation where it is suspected that fentanyl may be present but no fentanyl products are visible
 - Example: An EMS response to a suspected fentanyl overdose or law enforcement operation where intelligence indicates fentanyl products are suspected but are not visible on scene

- **Moderate:** Response to a situation where small amounts of fentanyl products are visible
 - Example: An EMS response to a suspected fentanyl overdose or law enforcement operation where fentanyl products are suspected and small amounts are visible on scene
- **High:** Response to a situation where liquid fentanyl or large amounts of fentanyl products are visible
 - Example: A fentanyl storage or distribution facility, fentanyl milling operation, or fentanyl production laboratory

It is important to recognize that the exposure level initially selected can change and PPE should be adjusted accordingly. Additionally, higher levels of PPE may be necessary to protect responders from exposure to other chemicals that may also be present in addition to fentanyl.

These recommendations cover examples of common exposures, but are not intended to prescribe PPE for every responder or exposure or discuss all PPE options. In all cases, employers must identify hazards to which their workers might be exposed and provide appropriate PPE to protect them. All PPE should be used in accordance with OSHA's PPE standard ([29 CFR 1910.132](#)). When required, respirator use should be in the context of a comprehensive respiratory protection program in accordance with the OSHA respiratory protection standard ([29 CFR 1910.134](#)) and other requirements. Responders who need to wear respirators must be medically cleared, trained, and fit-tested for respirator use.

Personal Protective Equipment Recommendations for Protection Against Fentanyl

	Pre-Hospital Patient Care			Law Enforcement Routine Duties			Investigations and Evidence Collection			Special Operations and Decontamination		
	Min	Mod	High	Min	Mod	High	Min	Mod	High	Min	Mod	High
Disposable N100, R100 or P100 FFR ¹		▲			▲			▲			▲	
Elastomeric APR ²								●	▲		●	▲
PAPR ³									●		●	●
SCBA ⁴									■			■
Safety Goggles/ Glasses ⁵		▲			▲			▲	▲		▲	▲
Nitrile Gloves ⁶	▲	▲		▲	▲		▲	▲		▲	▲	
Nitrile Gloves, Double or Use of Thicker Gloves		●			●			●	●		●	▲
Wrist/Arm Protection ⁷		▲			▲			▲			▲	
Particulate Hazard Protective Ensemble									▲			▲
Chemical Hazard Protective Ensemble									●			●

1. FFR: Filtering facepiece respirator, N: not resistant to oil, P: oil-proof, R: resistant to oil
2. APR: Air-purifying respirator
3. PAPR: Powered air-purifying respirator
4. SCBA: Self-contained breathing apparatus
5. Face and eye protection is recommended when the respirator does not provide this type of protection
6. Powder-free nitrile gloves
7. Wrist/arm protection may include one or more of the following: on-duty uniform with sleeves, sleeve covers, gowns or coveralls.

KEY
▲ Minimum protection recommended
● When an on-scene risk assessment is conducted and higher protection is warranted.
■ If particulate + gas/vapor hazard is expected above the immediately dangerous to life or health (IDLH) values or concentration is unknown, SCBA is recommended.
NOT RECOMMENDED, REFER SCEN TO SPECIAL OPERATIONS RESPONSE WORKERS (SUCH AS HAZMAT TEAM)

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Decontamination

The purpose of decontamination is to make an individual and the environment safe by physically removing toxic substances quickly and effectively. Care should be taken during decontamination, because absorbed agents can be released from clothing and skin.

Individual Decontamination: The following methods can be used to decontaminate an individual:

- Remove the victim from the contaminated area and into the decontamination area;
- Remove all contaminated clothing and place in a labeled durable 6-mil polyethylene bag;
- Thoroughly wash and rinse (using cold or warm water) the contaminated skin of the victim using a soap and water solution. Be careful not to break the victim's skin during the decontamination process and cover all open wounds;
- Cover the victim to prevent shock and loss of body heat; and
- Move the victim to an area where emergency medical treatment can be provided.

Environmental Decontamination: The following methods can be used to decontaminate the environment:

- Avoid touching or walking through the spilled agent. However, if you must, personnel should wear the appropriate PPE (see the *PPE* section of this fact sheet for detailed information);
- Keep combustibles (wood, paper and oil) away from the spilled agent. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact the spilled agent;
- Do not direct water at the spill;
- Stop the spill only if it is possible to do so without risk to personnel;
- Prevent entry into waterways, sewers, basements, or confined areas;
- Isolate the area until aerosolized spray has dispersed; and
- Ventilate the area.

First Aid

General Information: Treatment consists of administration of the antidote and aggressive support of respiratory function. Contact Emergency Medical Services immediately if you suspect exposure to fentanyl or any opioid.

Antidote: Naloxone has been recommended for treatment of opioid overdose, including those caused by Fentanyl.² Naloxone should be used during pregnancy only if the possible benefit outweighs the possible risk to the unborn baby. Naloxone is commonly given intramuscularly or in a spray form through the nasal passage. After 2-3 minutes if there is no responsiveness (no breathing/no pulse/unresponsiveness), or the individual responds but then relapses into respiratory depression, administer another dose of naloxone.

Eye:

- Immediately remove the victim from the source of exposure;
- Wash eyes with a steady stream of tepid water for at least 15 minutes; and
- Seek medical attention immediately.

² Check your local laws to see if pharmacies in your state can give you take home Naloxone (without bringing in a prescription).

Ingestion:

- Immediately remove the victim from the source of exposure;
- Ensure that the victim has an unobstructed airway;
- Do not induce vomiting;
- Administer naloxone under healthcare provider's direction; and
- Seek medical attention immediately.

Inhalation:

- Immediately remove the victim from the source of exposure;
- Evaluate respiratory function and pulse;
- Ensure that the victim has an unobstructed airway;
- If shortness of breath occurs or breathing is difficult, administer oxygen;
- Assist ventilation as required using a barrier or bag-valve-mask device;
- If breathing has ceased, provide artificial respiration using a barrier or bag-valve-mask device;
- Monitor the victim for signs of whole-body effects;³
- If signs of whole-body poisoning appear, see the *Ingestion* section for treatment recommendations; and
- Seek medical attention immediately.

Skin:

- Immediately remove the victim from the source of exposure;
- See the *Decontamination* section for victim decontamination procedures;
- Do NOT use alcohol-based hand sanitizer or chlorine-bleach to clean contaminated skin as they may enhance skin absorption of fentanyl.
- Monitor the victim for signs of whole-body effects;
- If signs of whole-body poisoning appear, see the *Ingestion* section for treatment recommendations; and
- Seek medical attention immediately.

Source Material

Much of the content of this document is taken from The Center for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH).⁴ Although other Governmental and Non-Governmental organizations have made recommendations for worker protection from exposure to fentanyl and its analogs, the interim recommendations proposed by NIOSH offer the best level of protection.

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³ Whole-body effects include: contracted, pinpoint or dilated pupils, reduced level of consciousness, reduced respiratory function, reduced blood oxygen content, accumulation of acid in the blood, low blood pressure, slow heart rate, shock, slowing of muscular movement of the stomach intestinal obstruction due to lack of normal muscle function, accumulation of fluid in the lungs, lethargy, coma, and death.

⁴ See Fentanyl: Preventing Occupational Exposure to Emergency Responders (<http://bit.ly/2sn3JOL>) for further detail.