Maryland
DEPARTMENT OF HEALTH

Maryland's Office of Overdose Response

# Fact Check: Accidental Fentanyl Exposure

Misinformation & Facts

## Background

In recent years, there have been widely circulated and misleading claims that an opioid overdose can occur just by coming into physical contact with trace amounts of fentanyl. Experts in the field of medicine and toxicology have said that this is extremely unlikely. It is important to have the facts on this topic so that first responders can be well informed about and prioritize the risks they may face in the field.

In 2021, more than 107,000 people lost their lives due to a drug overdose in the United States. Opioid involvement accounted for 75% of all drug overdose mortality, with fentanyl and fentanyl-related substances driving much of the overdose.[1] In the 12-month period ending in March 2023, 2,012 people died of a fentanyl overdose in the state of Maryland.[2]

Opioids, including fentanyl, are central nervous system depressants. This means that when an overdose occurs, symptoms usually include the person's body going limp, slowed or ceased breathing, and slowed or ceased heart rate.[3] When these symptoms are identified, it is imperative to administer naloxone, start rescue breathing, and call 911.

## What Do the Experts Say?

Experts say that the risk of overdose due to accidental exposure, such as skin contact, with fentanyl is very low.[4] Most first responders or law enforcement officers who report accidental exposure to fentanyl say that they came into contact with it by touching or inhaling it. The American College of Medical Toxicology (ACMT) and the American Academy of Clinical Toxicology (AACT) released a dual position statement explaining the risk of exposure to fentanyl via these two pathways.[5]

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[1] https://www.cdc.gov/nchs/pressroom/sosmap/drug_poisoning_mortality/drug_poisoning.htm
[2] https://www.arcgis.com/apps/dashboards/799cc6c21cf94e89a174fa06532febd9
[3] https://www.samhsa.gov/medications-substance-use-disorders/medications-counseling-related-conditions/opioid-overdose
[4] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5711758/
[5] Ibid.

The ACMT and AACT explain that it would take 14 minutes of constant exposure on the palms of the hands with prescription fentanyl patches to reach a dose of 100 micrograms of fentanyl, a dose roughly equivalent to 10 milligrams of morphine.[6] They further clarify that this example drastically overestimates the risk of transdermal exposure because fentanyl patches are prepared in a way that optimizes the delivery of fentanyl through the skin. Powder fentanyl that officers are most likely to encounter is not similarly optimized. As such, the ACMT and AACT note that it would take much longer and more surface area in contact with fentanyl to deliver a fatal dose.

The ACMT and AACT also note that the inhalation risk of fentanyl is similarly low. They use the example of workers in industrial settings where fentanyl is produced, where factories track airborne exposure to keep workers safe. They say that it would take 200 minutes of exposure at industrial levels to reach a dose of 100 micrograms, noting that it is exceedingly unlikely that first responders would come into contact with fentanyl for this long.

## Recent Reports Involving Misinformation

News media have recently reported on alleged incidents of first responders experiencing overdoses. However, the symptoms described and captured on film are distinct from the symptoms of an opioid overdose. In many of these cases, the individual remains conscious and talking throughout the event, sometimes hyperventilating, or in one instance passing out suddenly with rigidity in the arms.[5,7] There have never been clinical toxicology results confirming fentanyl exposure released following one of these incidents.

Experts suggest that the clinical presentation of these cases are distinct from that of an opioid overdose. Hallmark symptoms of an opioid overdose include loss of consciousness, inability to stand or move, and severely slowed or stopped breathing. Professionals have suggested that they might be experiencing panic attacks.[5] First responders could be at an elevated risk for panic attacks if they have the perception that touching a substance could potentially result in a deadly event.

## Why Is This Misinformation Dangerous?

Misinformation about the risks of accidental fentanyl exposure can lead to a variety of negative outcomes. Law enforcement officers, other first responders, and even the public may be wary or reluctant to attend to someone experiencing an overdose for fear of touching fentanyl. This could lead to officers going to unnecessary lengths (such as donning multiple layers of personal protective equipment) to safeguard themselves from fentanyl exposure prior to administering naloxone or other life-saving measures, delaying a response to the life-threatening emergency.[8] During an opioid overdose, individuals experience hypoxia, a lack of oxygen to the brain, and time spent delaying care increases the risk of brain damage. This misinformation can also increase the stigma that already exists toward people who use drugs. The notion that one could

[6] https://www.ncbi.nlm.nih.gov/books/NBK459275/
[7] https://www.npr.org/2023/05/16/1175726650/fentanyl-police-overdose-misinformation
[8] https://doi.org/10.1186/s40352-021-00163-5

overdose just from responding to an overdose paints the person overdosing as toxic, untouchable, and unsafe.

This misinformation can also cause increased stress and risk of burnout among law enforcement officers and other first responders. Already working high-stress jobs, officers and first responders who believe they may overdose and die from touching or inhaling fentanyl are at risk of increased stress levels and potential panic attacks while in the field.

## Recommendation

Researchers have studied ways to help correct misinformation and faulty beliefs surrounding the risk of accidental exposure to fentanyl. The Safety and Health Integration in the Enforcement of Laws on Drugs (SHIELD) training is a program designed to help educate law enforcement officers on harm reduction and occupational safety. Researchers found that the training helped shift the perception of law enforcement officers about the risk of accidental fentanyl exposure, having a corrective effect on misinformation.