

Health Effects from Exposure to Methamphetamine and Fentanyl Residue



If you see someone who may be overdosing, please address the emergency before managing any cleanup. Know the symptoms of overdose and keep naloxone available in the case of opioid overdose. Naloxone is safe for all ages, including infants and toddlers, and should be given if there is any concern of overdose.

See the [instructions on how to respond to an opioid overdose response here](#).

The information provided below supplements the Washington State Department of Health's (DOH) [Exposure Reduction Practices for Methamphetamine and Fentanyl Residue in Shelters and Housing Facilities](#) guide. It expands on possible health effects from exposure to methamphetamine or fentanyl residue. In these documents, residue means any form of methamphetamine or fentanyl leftover from use whether visible or not, including pills, powder, vapor or smoke build-up, liquid, skin patches, and drug paraphernalia. Please see the DOH guide for further information on cleaning a space where drug use may be present.

Overdose

Overdose occurs when someone is exposed to an amount of a drug that their body cannot handle.

Symptoms of overdose (also called "overamping") from stimulants ("uppers"), such as methamphetamine, can include severe agitation, rapid heart rate or abnormal heart rhythm, high blood pressure, elevated body temperature (hyperthermia), strokes, heart attacks, and not breathing.

Symptoms of overdose from depressants, such as opioids like fentanyl, can include slowed, weak, or stopped breathing, cold and clammy skin, pale skin or lips, and extreme sleepiness and can progress to the person being unable to wake (unconsciousness) and to them not breathing at all (respiratory arrest).

Exposure to residue, including second-hand vapor or smoke, from methamphetamine or fentanyl use in supportive housing facilities has not been documented to cause overdose or death in adults. However, younger children have a higher risk for unintentional exposure due to more contact with household surfaces through crawling and increased hand-to-mouth behavior. This exploratory behavior is normal and generally more common in children aged three and younger but may be seen in older children. Overdose has been reported in children who come across leftover fentanyl powder or pills¹. Frequent, ongoing cleaning of surfaces is needed to lower the risk of hand-to-mouth exposure in children. To the extent possible, children should be kept out of affected areas.



1 Office of the Family and Children's Ombuds Annual Report 2023. https://ofco.wa.gov/sites/default/files/2023-11/2023_OFCA_Annual_Report.pdf

Make sure you know the signs of overdose. In case of opioid overdose, know how to administer naloxone (also known by the brand name NARCAN). Naloxone only works on opioids and will not reverse the effects of methamphetamine, alcohol, cocaine, or other drug overdose. Give naloxone even if you do not know what kind of drugs a person took as there is no harm if they took a different kind of drug. Naloxone can be given to both adults (including pregnant people) and children. DOH recommends all facilities keep naloxone available for use in the event of an opioid overdose. Please visit [the Department of Health website for information on signs of overdose, how to take action, and naloxone, including how to get it.](#)

Possible Sub-lethal Health Effects

Health effects, such as rashes and headaches, have been reported by people living in spaces containing methamphetamine residue, but less is known about what health effects may occur from fentanyl residue in residences. Adults and children living in housing where methamphetamine use has occurred have reported temporary health effects that went away once they left the exposure area². Some of these reported health effects are similar to those reported as side effects of methamphetamine when prescribed³. While we don't have studies on health effects experienced by people living in areas with fentanyl residue, health effects reported by first responders who were exposed to fentanyl⁴ are similar to side effects of fentanyl when prescribed⁵. Potential exposure to drug residue may also lead to emotional distress and anxiety. The health effects of living or working in spaces with continued exposure to methamphetamine and fentanyl residue for extended periods of time have not been studied.

Additionally, there haven't been studies on health effects from exposure to methamphetamine or fentanyl secondhand vapor or smoke. Therefore, it is not yet known if vaporizing or smoking fentanyl results in levels in the air above the levels considered safe for workers to be exposed to⁶. However, being around any kind of vapor or smoke, including tobacco smoke, is unhealthy. [Here is guidance to learn more about secondhand vapor or smoke.](#)

Methamphetamine^{2,3}

- Skin irritation (rash)
- Difficulty sleeping
- Eye irritation (sore/watery eyes)
- Headaches
- Respiratory effects (coughing, asthma-like symptoms)
- Effects on immune system (recurrent respiratory infections)
- Behavioral changes (irritability, aggression, anxiety, depression, memory issues)

Fentanyl^{5,6}

- Skin irritation (rash)
- Drowsiness or difficulty sleeping
- Dizziness, nausea, or vomiting
- Headaches
- Respiratory effects (shortness of breath)
- Physical weakness
- Decreased blood pressure
- Constipation
- Behavioral changes (anxiety, depression, confusion, abnormal thinking)
- Behavioral changes

2 Wright J., Kenneally M., Ross K., Walker G.S. Environmental methamphetamine exposures and health effects in 25 case studies. *Toxics*. 2020;8:61. doi: 10.3390/toxics8030061

3 Food & Drug Administration. Desoxy label. https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/005378s038lbl.pdf

4 NIOSH 2021 Evaluation of Occupational Exposure to Opioids in a City Police Department. HHE Report No. 2018-0015-3383

5 Food & Drug Administration. Actiq label. https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/020747s062lbl.pdf

6 ACGIH. 2023. Fentanyl and fentanyl citrate. 2023 DOC-834-CS.

Some health effects caused by methamphetamine and fentanyl exposure to the fetus during pregnancy are irreversible. However, prenatal health effects have currently not been reported for exposures to drug residue in housing. Prenatal health effects have been reported in babies born to people who used methamphetamine while pregnant, which include delayed motor skills (e.g. grasping), lower birth weight, smaller head circumference, and decreased memory and attention^{7,8,9,10,11}. Neonatal (newborn) opioid withdrawal syndrome is a treatable condition that has been reported in babies born to people who used fentanyl and other opioids while pregnant. This syndrome can cause hyperactivity and disrupted sleep, tremors, vomiting, diarrhea, and failure to gain weight⁵. Both fentanyl and methamphetamine cross the placenta and may cause long-term effects in babies with substantial prenatal exposure. It is currently unknown whether these irreversible effects can occur from exposure to methamphetamine and fentanyl residue in housing.

Recommendations

DOH recommends **reducing any potential for exposure to drug residues**, particularly for pregnant people, people who may become pregnant, babies, and children who may be in these facilities. If possible, separate areas where these vulnerable populations spend time from areas where drug use may occur. Regularly clean toys, furniture, and other objects used by children. Follow our Preventative Practices and Exposure Reduction Recommendations in the Exposure Reduction Practices for Methamphetamine and Fentanyl Residue in Shelters and Housing Facilities guide to further prevent exposure.

If someone has vaporized or smoked anything (including tobacco) in a public area, you can help reduce exposure and negative health impacts by **opening windows and doors** to get rid of the vapor/smoke.

Parents and caregivers should be encouraged to **closely monitor children** living in areas that may potentially have methamphetamine or fentanyl residue. For a variety of health and safety reasons, parents and caregivers should be advised to prevent children from putting objects in their mouths or swallowing unknown substances.

Know the symptoms of opioid overdose and keep naloxone available in the case of opioid overdose.

Naloxone is safe for all ages, including infants and toddlers, and should be given if there is any concern of overdose. Seek medical care immediately in case of an overdose by calling 9-1-1 and consult your health care provider if you experience any of the other health effects listed in this guidance.

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