What is fentanyl?
Fentanyl is a highly potent synthetic opioid that depresses breathing and the central nervous system. Synthetic opioids are made in a laboratory, but they have the same effects on the brain as natural opioids such as morphine and codeine. Pharmaceutical fentanyl is prescribed by doctors to treat severe pain – but fentanyl is also made and distributed illegally. Fentanyl is the most potent of all the opioids and is relatively easy to mix with other dangerous drugs or to press into tablets that look like legal drugs. As little as 2 milligrams of pure fentanyl, which is about the size of 10 to 15 grains of salt, can be fatal. Fentanyl has now surpassed methamphetamine as the most frequent drug involved in overdose deaths in Oregon.

Who could be exposed to fentanyl?
Workers who come into contact with the public or work in public spaces could be exposed to fentanyl. Workers who have an increased risk of exposure include:

- Health care workers, including emergency medical personnel and those providing hospital care
- Law enforcement and supporting personnel such as crime lab workers
- Fire service workers, including firefighters and hazmat team members

- Workers who clean up or move garbage – especially from crime scenes, drug labs, homeless camps, and public areas (including parks, roadways, parking lots, and restrooms)
- Workers who perform maintenance or repair (including skilled tradespeople)

How can workers be exposed to fentanyl?
Possible routes of exposure include:

- Inhalation of airborne powders and aerosols
- Absorption of a liquid or gel through the skin
- Ingestion
- Injection through the skin by a needle or sharp object
- Contact with mucus membranes in the eyes, nose, or mouth; or contact with skin that is not intact

What are the symptoms of overexposure?
Symptoms can occur with fentanyl doses as low as 2.5 micrograms. Overexposure can produce symptoms such as:

- Shortness of breath
- Slowing of the central nervous system including breathing and pulse
- Drowsiness
- Reduced level or loss of consciousness
Fentanyl’s Workplace Threat

Responding to an overdose in the workplace

An opioid overdose is life-threatening and requires immediate emergency attention. If you suspect someone has overdosed, call 911. Signs of an opioid overdose include:

- Difficulty or inability to wake up
- Slow or no breathing
- Bluish or pale lips and fingernails
- Pale or clammy skin
- Abnormal snoring or breathing sounds
- Vomiting or foaming at the mouth

Using naloxone as an emergency treatment for an opioid overdose

The surge in the misuse of opioids also increases the chance that some workers could encounter a person who is experiencing an overdose reaction. Naloxone is a medication approved by the Food and Drug Administration that can quickly reverse an opioid overdose or an overdose of an opioid combined with other sedatives or stimulants. Naloxone recently has become available over the counter. Narcan is a common brand name. Naloxone only works for opioid drugs – including heroin, morphine, oxycodone, oxymorphone, methadone, hydrocodone, codeine, and fentanyl. Naloxone is not effective in treating overdoses of benzodiazepines or stimulant overdoses involving cocaine and amphetamines.

- Naloxone can be given by nasal spray, into the muscle, under the skin, or by intravenous injection.
- Naloxone should always be readily available where overdose risks are possible.

- Oregon has a Good Samaritan law that protects individuals from civil prosecution if they give someone naloxone in a good faith effort to reverse opioid overdose.

As fentanyl overdoses continue to rise, it is becoming more common for workplaces to have naloxone on site to respond to an emergency. Those who provide naloxone should have first-aid training, be trained to recognize the signs of an opioid overdose, and know how to administer the medication. Always contact emergency medical providers in case of possible overdose, even if naloxone is administered. It is possible multiple doses of naloxone may be required and that the effects of fentanyl will last longer than the naloxone.

Fentanyl exposure risks in the workplace and how to avoid them

Employers are required to protect employees who could be exposed to serious hazards associated with fentanyl. Those hazards typically include potential exposure to fentanyl powders, aerosols, and liquids. Employers should perform a hazard assessment and evaluate control measures, including engineering controls, work practices, and personal protective equipment (PPE). Even when other control measures are implemented, PPE should also be worn.

When PPE is required, employers must:

- Select the PPE that protects their employees from the hazards
- Communicate their selection decisions to each affected employee
- Ensure the PPE fits each employee
- Train employees in how to use the PPE
- Require employees to use the PPE when they are exposed to the hazards
Examples of PPE that employees might need based on the hazard assessment include:

- Inhalation hazard. At a minimum, a NIOSH-approved disposable N100, P100, or R100 filtering facepiece respirator. If greater protection is necessary, use an elastomeric air-purifying respirator or powered air-purifying respirator. Respirators also protect against potential contact with the mucus membranes of the nose or mouth.

- Contact with the eyes. At a minimum, safety glasses for powders and aerosols, and safety goggles for liquids.

- Adsorption through the skin or skin that is not intact. A minimum of disposable gloves appropriate to the task or gloves that can be decontaminated.

- Disposable shoe or boot covers, and gowns to prevent fentanyl dusts from contaminating clothing. Use aprons or other impermeable clothing for liquids.

Hygiene

Wash hands with soap and water after completing the task and removing any PPE. Avoid the use of hand sanitizers as they may cause exposure through the skin. A shower may be warranted. Bag clothing for disposal, for cleaning, or for decontamination. Do not wear or take PPE home.

The Recovery Friendly Workplace initiative

In 2018, New Hampshire Gov. Chris Sununu launched the country’s first “Recovery Friendly Workplace” initiative, which was intended to help those whose lives have been interrupted by drug and alcohol addiction. The initiative’s goal is to encourage workplaces to provide support for those who have struggled with addiction and to give them an opportunity to work again.

Employers who invest in Recovery Friendly Workplace programs view substance abuse as a treatable medical condition and provide support for new employees. Currently, more than 25 states have started Recovery Friendly Workplace programs. To learn more about these programs, see the National Institute of Environmental Services’ Recovery Friendly Workplace webpage.

More information

- SAIF's Preventing Workplace Exposure provides practical guidance regarding methods to protect employees from the hazards of fentanyl.

- The Environmental Protection Agency's Fentanyl and Fentanyl Analogs provides information regarding physical properties, personal safety, and decontamination.

- The Centers for Disease Control and Prevention's The Facts about Fentanyl provides information about illegally made fentanyl, fentanyl and overdose deaths, and signs of an overdose.