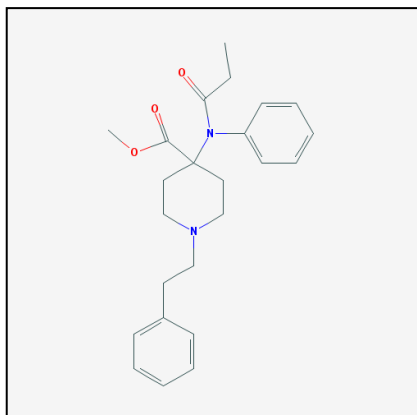




Public Health Alert

Carfentanil and Synthetic Opioids

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The Drug Enforcement Administration (DEA) recently released an Officer Safety Alert¹ detailing the synthetic opioid carfentanil, which has been identified in the illicit drug market across the country. In early September in Ohio, at least 8 deaths were attributed to this potent analgesic², which is used as a sedative for large animals. This drug was also used in 2002 in an aerosolized form to overcome Chechen rebels during the Moscow theatre hostage crisis. Other synthetic opioids have also been reported in Canada and the US including the W-series compounds of which W-18 is 100 times more potent than fentanyl and fentanyl analogs like acetyl-fentanyl.

What is it? Carfentanil is an analog of the synthetic opioid fentanyl. Due to its binding affinity to opioid receptors, it is 10,000x more potent than morphine and 100 times more potent than fentanyl. This drug has no recognized use in humans and is approved for veterinary use as a general anesthetic in large animals. The W-series are a class of synthetic opioids discovered in the 1980s and may have recently been implicated in the death of a 35-year old man in Calgary.

What is the problem? Patients who overdose on carfentanil will present in a similar fashion to other opioid overdoses with sedation/coma, apnea, and miosis appearing within minutes of exposure. However, due to the extreme binding of the drug to the opioid receptors and their potency, standard therapy and doses with naloxone are unlikely to be of benefit in reversing symptoms.



How to treat carfentanil overdoses. Carfentanil is unlikely to show up on a standard urine drug screen. Patient management should rely on clinical presentation and response to interventions.

- Patients experiencing adverse effects will likely need repeated doses of naloxone.
- Compared to heroin and other opioids, higher doses of naloxone may be required.
- Ventilatory support may be needed if naloxone therapy is ineffective at reversing symptoms.

CAUTION: Transdermal and respiratory absorption has been reported with carfentanil, therefore providers and first responders should exercise caution when in contact with this drug.

The Washington Poison Center maintains a 24/7 free toxicology phone consult service staffed by 7 board-certified toxicologists who are able to assist you in the management of these patients. **The on-call toxicologist can be contacted through the Washington Poison Center's number at 1-800-222-1222.**

Links to Citations

- 1 https://mystateusa.com/docs/NWWARN.WA/16-0190_Carfentanil_-_A_Dangerous_New_Factor_in_the_U.S._Opioid_Crisis.pdf
- 2 <http://www.cnn.com/2016/09/06/health/carfentanil-deaths-ohio/>