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ACRYLFENTANYL AND NALOXONE EFFECTIVENESS

Recently there have been news reports of a “new” fentanyl analogue, acrylfentanyl, calling the drug “extremely powerful” and implying that it can render naloxone ineffective. Elements of these reports are incorrect and misleading.

- Fentanyl and its analogues, including acrylfentanyl, are synthetic opioids that bind to and activate the opioid receptors in the brain creating analgesic and euphoric effects. Compared to other opioid medications, most types of fentanyl are extremely powerful.
- Acrylfentanyl is *not* a new kind of synthetic opioid. Rather, it belongs to the family of fentanyl analogues that are well-known to the medical and law enforcement communities nationwide.
- Acrylfentanyl is *not* more powerful than other fentanyls used in the illicit market. Acrylfentanyl has a morphine equivalency of about 50-100, meaning that acrylfentanyl is 50-100 times more powerful than morphine. However, this is the same morphine equivalency as fentanyl itself and lower than that of other well-known fentanyl analogues.
- Naloxone belongs to a category of drugs known as opioid antagonists, meaning they bind to the same opioid receptors as synthetic opioids but do not activate the receptors or cause any psychoactive effects. By taking the place of the opioid on the opioid receptor, antagonists reverse an opioid’s effect. If administered quickly and at a sufficient dose, naloxone and other opioid antagonists are effective against all opioids regardless of their potency.
- There have been well-documented cases in which a patient who has overdosed on a synthetic opioid required several administrations of naloxone to reverse the effects of the overdose. However, this is often a function of the dose of naloxone administered as well as time elapsed since the patient took the drug.
- Moreover, naloxone’s duration of action is shorter than that of most opioids, including fentanyl and its analogs, and a patient resuscitated by naloxone may appear to overdose again as the naloxone leaves the brain. This does not mean the naloxone is ineffective, but rather that an additional administration of naloxone is necessary to fully resuscitate the patient.
- When administered within the right amount of time, for example before brain death, heart failure, or other complication sets in, and at the right dosage level, naloxone will effectively reverse the effects of an overdose and prevent death for any opioid, acrylfentanyl included.
- For more information on acrylfentanyl, fentanyl and its analogues, and naloxone effectiveness, please refer to:

SAMHSA Opioid Overdose Toolkit website <http://store.samhsa.gov/product/SAMHSA-Opioid-Overdose-Prevention-Toolkit/SMA16-4742>

Bureau of Justice Assistance Law Enforcement Naloxone Toolkit website <https://www.bjatrainng.org/tools/naloxone/Naloxone-Background>