Synthetic Opioids

WHAT ARE SYNTHETIC OPIOIDS?

Synthetic opioids are substances that are synthesized in a laboratory and that act on the same targets in the brain as natural opioids (e.g., morphine and codeine) to produce analgesic (pain relief) effects. In contrast, natural opioids are naturally occurring substances extracted from the seed pod of certain varieties of poppy plants. Some synthetic opioids, such as fentanyl, methadone, and buprenorphine have been approved for medical use.

Clandestinely produced synthetic opioids structurally related to the Schedule II opioid analgesic fentanyl were trafficked and used on the West Coast in the late 1970s and 1980s. In the 1980s, DEA controlled several of these illicitly produced synthetic opioids such as alpha-methylfentanyl, 3-methylthiofentanyl, acetyl-alpha-methylfentanyl, beta-hydroxy-3-methylfentanyl, alpha-methylthiofentanyl, thiofentanyl, beta-hydroxyfentanyl, para-fluorofentanyl, and 3-methylfentanyl.

As of 2013, there has been a re-emergence in the trafficking and use of various clandestinely produced synthetic opioids, including several substances related to fentanyl. Some common illicitly produced synthetic opioids that are currently encountered by law enforcement include, but are not limited to, acetyl fentanyl, butyryl fentanyl, beta- hydroxythiofentanyl, furanyl fentanyl, 4-fluoroisobutyryl fentanyl, acryl fentanyl, U-47700, and benzimidazole-opioids such as etonitazene and isotonitazene.

Clandestinely produced fake oxycodone tablets that contain fentanyl.

WHAT IS THEIR ORIGIN?

Synthetic opioids are believed to be synthesized abroad and then imported into the United States.

What do they look like?

Clandestinely produced synthetic opioids have been encountered in powder form and were identified on bottle caps and spoons, detected within glassine bags, on digital scales, and on sifters which demonstrates the use of these substances as replacements for heroin or other opioids. These drugs are also encountered as tablets, mimicking pharmaceutical opioid products. Clandestinely produced synthetic opioids are encountered as a single substance in combination with other opioids (fentanyl, heroin, U-47700, benzimidazole-opioids e.g., etonitazene and isotonitazene) or other substances.

New Emerging Synthetic Opioids-Benzimidazole-Opioids (Nitazenes)

Since 2019, the use of benzimidazole-opioids, commonly referred to as “nitazenes” has resulted in adverse health effects including deaths. This class of synthetic opioids have no approved medical use. The population likely to use benzimidazole-opioids appears to be the same as those using prescription opioid analgesics, heroin, and other synthetic opioid substances. Because users of these benzimidazole-opioids are likely to obtain them through unregulated sources, the identity, purity, and quantity are uncertain and inconsistent, thus posing significant adverse health risks to the users.

Clonitazene

How are they used?

Use of clandestinely produced synthetic opioids parallels that of heroin and prescription opioid analgesics. Many of these illicitly produced synthetic opioids are more potent than morphine and heroin and thus have the potential to result in a fatal overdose.

What are their effects?

Some effects of clandestinely produced synthetic opioids, similar to other commonly used opioid analgesics (e.g., morphine), may include relaxation, euphoria, pain relief, sedation, confusion, drowsiness, dizziness, nausea, vomiting, urinary retention, pupillary constriction, and respiratory depression.

What are their overdose effects?

Overdose effects of clandestinely produced synthetic opioids are similar to other opioid analgesics. These effects may include stupor, changes in pupillary size, cold and clammy skin, cyanosis, coma, and respiratory failure leading to death. The presence of triad of symptoms such as coma, pinpoint pupils, and respiratory depression are strongly suggestive of opioid poisoning.

Which drugs cause similar effects?

Some drugs that cause similar effects include other opioids such as morphine, hydrocodone, oxycodone, hydromorphone, methadone, and heroin.

What is their legal status in the United States?

Many synthetic opioids are currently controlled under the Controlled Substances Act. DEA temporarily placed U-47700, isotonitazene, and several other substances that are structurally related to fentanyl, such as acetyl fentanyl, butyryl fentanyl, beta-hydroxythiofentanyl, and furanyl fentanyl, in Schedule I of the Controlled Substances Act. In February 2018, DEA temporarily placed fentanyl-related substances in Schedule I of the CSA. Other synthetic opioid substances may be subject to prosecution under the Controlled Substance Analogue Enforcement Act which allows noncontrolled substances to be treated as Schedule I substances if certain criteria are met. DEA has successfully investigated and prosecuted individuals trafficking and selling these dangerous substances using the Controlled Substances Analogue Enforcement Act.