

Nitazenes: A Dangerous Class of Synthetic Opioids

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Background

Nitazenes are a class of synthetic opioids that pose serious risk to health and have caused a significant number of deaths¹. **One notable characteristic of nitazenes is their potency, which is over tenfold the potency of fentanyl and hundredfold the potency of morphine².** While their re-emergence has become an increasing concern in recent years, nitazenes are older opioid analgesic drugs originally developed in the 1950's but never approved for market use¹. Due to the inexpensive manufacturing and availability, they are a popular street drug¹. Nitazenes are sometimes referred to by nicknames such as "Iso" or "Tony"¹.

Some of the drugs included in the nitazene subgroup including etonitazene, isotonitazene, clonitazene, and several additional nitazene analogs are listed as Schedule I substances under the Controlled Substances Act². However, an increased popularity of synthetic opioids among PWUD and a lack of scheduling for several drug compounds increases the risk of overdose. Some of the drugs included in the nitazene subgroup including etonitazene, isotonitazene, clonitazene, and several additional nitazene analogs are listed as Schedule I substances under the Controlled Substances Act². However, an increased popularity of synthetic opioids among PWUD and a lack of scheduling for several drug compounds increases the risk of overdose.

Effects

Nitazenes, chemically known as 2-benzylbenzimidazoles opioids, act on the mu-opioid receptors similarly to drugs like heroin and fentanyl³. Due to their potency and street appeal, nitazenes are often compared to fentanyl, however they differ structurally². People

may use nitazenes for the short-term effects of relaxation, pain relief and mood enhancement³. However, there are many negative effects associated with nitazene use including nausea, slowed breathing, fever, and sweating. Like other opioids, long-term use of nitazenes can lead to dependence and increased tolerance³. Nitazene overdose can cause adverse health effects including respiratory issues, seizures, brain damage and other serious complications⁴. Research has shown that prolonged respiratory depression is one of the major side effects associated with nitazene use, which typically lasts longer than the respiratory effects of fentanyl³.

The most common route of administration is injection, though other routes can include smoking, snorting, and ingestion⁵. The most common route of administration is injection, though other routes can include smoking, snorting, and ingestion⁵.

Treatment

The re-emergence of nitazene drugs has led to increased overdose deaths in recent years. The Centers for Disease Control and Prevention's Mortality and Morbidity Weekly Report (MMWR) data showed an increase in the number of nitazene-involved deaths between 2019 and 2021 in Tennessee⁵. In 2019, there were no deaths linked to nitazenes, however, that number jumped to 10 deaths in 2020, and rose again to 42 deaths in 2021—a fourfold increase in just one year⁵. According to the DEA's National Forensic Laboratory Information System, there have been over 4,300 reports of benzimidazole opioids in the U.S. since 2019². The actual number of nitazene-involved deaths is thought to be underestimated due to a low frequency of testing⁵.

To treat a suspected nitazene overdose, the CDC recommends administering naloxone⁵. Due to the high potency of the drug, longer periods of observation may be necessary in the event of additional naloxone dosing⁵.

Resources

To learn more about opioids and other drugs, you can access articles and educational materials on the MATTERS website. Resources can be found at <https://mattersnetwork.org/edu/> and <https://mattersnetwork.org/news/>. Order free harm reduction supplies, including naloxone, on our website or mobile app.

References

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