

UPDATED: Further cases of dependence linked to use of nitazenes (strong opioids) in refillable vape liquids



SAFETY NOTICE 021/25

Issue date:	20 August 2025
Content reviewed by:	Centre for Alcohol and Other Drugs – NSW Ministry of Health, NSW Standing Panel on Toxicity Risk
Replaces:	Safety Notice 023/24
Distributed to:	Chief Executives; Directors of Clinical Governance; Directors, Regulation and Compliance Unit
KEY MESSAGE:	Inform NSW Health clinicians of the ongoing risk of overdose and withdrawal associated with refillable vapes containing nitazenes, and pathways for reporting.
ACTION REQUIRED BY:	Chief Executives; Directors of Clinical Governance
REQUIRED ACTION:	<ol style="list-style-type: none"> 1. Distribute this Safety Notice to all relevant clinicians and clinical departments where patients who use refillable vapes may present with toxicity (overdose), dependence or withdrawal. 2. Ensure that clinicians and other relevant staff are aware of the <i>Recommendations</i> and <i>Notification</i> sections of this Safety Notice and take appropriate action.
We recommend you also inform:	<p>Directors, Managers and Staff of:</p> <ul style="list-style-type: none"> • Medical, Nursing/Midwifery and Pharmacy Services • Emergency Departments • Drug and Alcohol services • Mental Health services • Intensive Care Units • Paediatric Units (including Paediatric Outpatient Departments) • Setting providing services to adolescents/youth (for example, Youth Health Services) • Forensic Medicine services • Toxicology Units • NSW Ambulance
Website:	https://www.health.nsw.gov.au/sabs/Pages/default.aspx http://internal.health.nsw.gov.au/quality/sabs/index.html
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What is updated in the Safety Notice from SN: 023/24?

This Safety Notice replaces 'SN: 023/24 – UPDATED: Cases of dependence and overdose linked to nitazenes (strong opioids) in refillable vape liquids', which has now been rescinded. This update includes details of further cases of dependence and withdrawal relating to nitazenes in refillable vapes (e-cigarettes), and product details of vapes related to these cases.

Situation

Since July 2024, 10 people in Western and South-Western Sydney have presented in severe opioid withdrawal after ceasing prolonged regular use of refillable vapes. The vape liquids these individuals reported using were often clear yellow and stored in clear plastic canisters. The information is that they were sold as illicit vape liquids and in some cases were described as containing cannabinoids and/or nicotine. Nitazenes were detected from biological samples or vape liquid in all 10 cases, and protonitazene was identified in 8 of the cases. Protonitazene is a benzimidazole opioid which is about 200 times more potent than morphine (1). An eleventh patient presenting in withdrawal after intentional nitazene use was initially thought to be vaping, and later clarified to be smoking the nitazene powder using a pipe.

Some of the patients using nitazenes in refillable vapes required complex medical management of their opioid withdrawal with buprenorphine, and some required hospital admission. All 10 patients were in early adulthood, previously opioid naïve, and had been using vapes for at least several months.

In 2023 there were 3 people who were harmed (including one death), suspected to be linked to use of vape liquids containing a nitazene (protonitazene or isotonitazene) (referred to in SN:031/23). Poisoning occurred in 2 people after using only 6-8 puffs of their vape device. All 3 were seeking to use non-nicotine drugs – one was expecting cannabinoids and the other 2 were expecting a synthetic opioid.

Illicit drugs identified from previous police seizures of vape liquids include nitazenes, novel benzodiazepines, synthetic and natural cannabinoids and dimethyltryptamine (DMT).

Assessment

Nitazenes are synthetic opioids and are becoming more prevalent in international and Australian drug markets, including in NSW (2, 3). Overdoses after use of vape liquid containing a nitazene have also been reported interstate, sometimes resulting in death (4). Several different nitazene compounds are in circulation. Each nitazene compound likely has differing pharmacodynamics and pharmacokinetics (5). Nitazenes are mostly highly potent μ -opioid receptor agonists, with some having a potency similar to, or greater than, fentanyl. Nitazenes can have a longer duration of action compared to other opioids, so overdose can recur despite initial reversal with naloxone, and can pose a higher risk of respiratory depression. As with all opioids, repeated nitazene use can cause dependence and withdrawal syndromes.

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Recommendations

- Notify **all** cases of suspected use of nitazenes, particularly acute poisoning or withdrawal, as per 'Notification' section below.
- Please ensure that urine, blood and vape device/liquid samples are collected and retained. Sample analysis may be performed for clinical management or public health purposes.
- Obtain a detailed history from people using vapes, particularly those with refillable vape liquid. The history should gather information on what drug was being sought, effects after use (particularly any opioid-like effects), how/where they obtained the vape liquid, whether they have any vape liquid remaining, and whether they know of others that have experienced harms. In documentation, include a description of the vape device and vape liquid (and include images if possible).
- People using an illicit vape should be advised to keep their device and associated paraphernalia in a locked box, particularly if children live with or visit them.
- If a person presents requesting withdrawal management from vapes suspected to contain nitazenes or other novel synthetic opioids, advice can be sought from local drug and alcohol services, or the [Drug and Alcohol Specialist Advisory Service](#) on 1800 023 687. Further advice on how to manage these patients is available in the Nitazenes Dependence Consensus Guide for Clinicians [here](#).
- Higher titrated doses of intravenous/intramuscular naloxone of 800 micrograms or more may be required to reverse severe opioid toxicity (overdose).
 - Repeat naloxone doses or an infusion may be necessary.
 - For people who have been treated with naloxone, observation for at least 4 hours after the last dose of naloxone is required. Longer observation may be required for people receiving higher doses of naloxone. Seek specialist toxicology advice from a local service or the NSW Poisons Information Centre on 13 11 26 if uncertain.
- Discuss the extremely high potency of nitazenes with people considering their use, and that this can mean a higher risk of overdose.
- Supply take-home naloxone to people who use illicit drugs (including in vape liquid) on discharge following opioid poisoning. When supplying take-home naloxone, advise patients that a standard dose of take-home naloxone will likely reverse nitazene toxicity, but due to the risk of recurrence of overdose, an ambulance should be called. Advise people that take home naloxone can also be accessed free without prescription through many community pharmacies, needle and syringe programs, opioid treatment services and NGOs such as NUAA. The [Your Room website](#) has details of participating sites and more information on take-home naloxone. NUAA also offer a mail order program for naloxone (shop.nuaa.org.au or call 02 9171 6650).

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Notification

- All cases of suspected use of nitazenes, particularly poisoning or withdrawal should be notified to the NSW Ministry of Health (MOH-PRISE@health.nsw.gov.au) or NSW Poisons Information Centre (13 11 26). Please also notify of any toxicity or death related to any vape use.

Further information

Your Room Nitazene Fact Sheet (can be given to patients or posted in clinics)

Nitazenes Dependence – withdrawal and induction to treatment (Consensus Guide for Clinicians)

References

1. The National Centre for Clinical Research on Emerging Drugs Emerging drug briefing Increasing reports of nitazene toxicity in Australia [Internet]. 2024. Available from: <https://nccred.org.au/wp-content/uploads/2024/04/Nitazenes-Emerging-Drug-Briefing.pdf>
2. Smith JL, Brown J, Atefi D, Jiranantakan T, Shaw V, Ewers C, du Toit-Prinsloo L, Roberts DM. Trends in novel opioid use and detections in exposures and police drug seizures in New South Wales. Drug Alcohol Rev. 2025 Apr 16. doi: 10.1111/dar.14057. Epub ahead of print. PMID: 40235268.
3. Roberts DM, Tisdell B, Sajeev MF, Jiranantakan T, Harvey C, Brown JA. Clinical experiences with the nitazene class of synthetic opioids: a cohort study. [Article in Press] Annals of Emergency Medicine. 2025 Aug 14. doi 10.1016/j.annemergmed.2025.06.619.
4. Syrjanen R, Schumann JL, Castle JW, Sharp L, Griffiths A, Blakey K, et al. Protonitazene detection in two cases of opioid toxicity following the use of tetrahydrocannabinol vape products in Australia. Clinical Toxicology. 2024 Jul 30;1–3.
5. Stangeland M, Dale O, Skulberg AK. Nitazenes: review of comparative pharmacology and antagonist action. Clin Toxicol (Phila). 2025 Jun;63(6):393-406. doi: 10.1080/15563650.2025.2504133. Epub 2025 May 27. PMID: 40422647.