



NEW YORK CITY DEPARTMENT OF  
HEALTH AND MENTAL HYGIENE  
Michelle Morse, MD, MPH  
*Acting Commissioner*

## 2026 Health Advisory #2: Medetomidine Withdrawal

Please distribute to clinical staff in primary care, family medicine, internal medicine, psychiatry, pharmacy, emergency medicine, and critical care medicine.

- Medetomidine is a non-opioid veterinary anesthetic similar to xylazine that is more potent and has longer-lasting effects.
- Medetomidine use is associated with a severe withdrawal syndrome that may require intensive medical care.
  - Signs and symptoms of withdrawal include fast heartbeat, high blood pressure, heavy sweating, shaking or twitching, anxiety and restlessness, nausea and intractable vomiting, chest pain, and waxing and waning alertness.
  - Emerging guidance suggests that medetomidine withdrawal management should include: opioid withdrawal management; alpha-2 agonist therapy with clonidine and dexmedetomidine if needed; treatment of agitation as needed; and hypertension management (preferably via withdrawal management).
- Medetomidine was first identified in the NYC opioid supply in [May 2024](#).
  - Between January 1, 2025, and December 31, 2025, the NYC Health Department has identified medetomidine in 32% of samples sold as opioids that were submitted to the NYC Drug Checking Program and have available secondary testing results. Nearly all of the samples that contained medetomidine also contained fentanyl.
  - While the prevalence of medetomidine in samples sold as opioids has increased since medetomidine was first detected in June 2024, it has remained relatively stable since April 2025.
- Drug withdrawal-related emergency department visits have been increasing in New York City since 2021, well before the detection of medetomidine in the drug supply in May 2024. Nonetheless, drug withdrawal-related emergency department visits were higher during all four quarters of 2025 than previous quarters.
- Contact the NYC Poison Center immediately at **212-POISONS** or **212-764-7667** if you observe or learn of unusual overdoses or other adverse events, including those with symptoms consistent with medetomidine-involved overdose or medetomidine withdrawal.

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January 23, 2026

Dear Colleagues,

Medetomidine is a synthetic alpha-2 adrenoreceptor agonist sedative similar to xylazine that is used in veterinary medicine. Medetomidine is used for sedation, analgesia, muscle relaxation and

anxiolysis (i.e., anti-anxiety). Medetomidine was identified in the unregulated opioid supply in New York City, Philadelphia, Pittsburgh, Chicago, and other jurisdictions across the United States in 2024.

The effects of medetomidine intoxication may include slower than usual heart rate (reportedly as low as 32 beats per minute), low blood pressure, and central nervous system depression including extreme sedation.<sup>i</sup> Effects of medetomidine, including sedation and bradycardia, can be prolonged; in a recent case series, bradycardia was observed to persist for up to approximately 32 hours.<sup>i</sup> A person experiencing medetomidine intoxication may be unresponsive to verbal commands or physical stimuli even though they may still be breathing.

**Medetomidine use is associated with a severe withdrawal syndrome that may require hospitalization.** It is important to recognize when someone may be experiencing medetomidine withdrawal so that it can be treated effectively. Signs and symptoms associated with medetomidine withdrawal include:

- Fast heartbeat (more than 100 bpm)
- High blood pressure (above 180/100)
- Heavy sweating
- Shaking or twitching
- Anxiety, restlessness, and agitation
- Nausea and uncontrollable vomiting
- Chest pain
- Waxing and waning alertness

Consider potential medetomidine toxicity for people who present with suspected opioid overdose and who experience prolonged sedation following naloxone administration. People who do not improve after standard opioid withdrawal treatment and continue to exhibit the signs and symptoms listed above may be experiencing medetomidine withdrawal syndrome.

### **Recommendations: Treatment of Medetomidine Withdrawal Syndrome**

- There is currently no evidence-based consensus on best practices for triaging and treating people with this syndrome, and recommendations will likely evolve over time as clinicians gain experience with management of this syndrome. However, emerging guidance suggests that medetomidine withdrawal management should include:<sup>ii</sup>
  - Opioid withdrawal management (including administration of long- and short-acting opioids)
  - Alpha-2 agonist therapy with clonidine and dexmedetomidine if needed
  - Treatment of agitation as needed with antipsychotics, benzodiazepines, and/or barbiturates
  - Hypertension management
    - Hypertension control via withdrawal management with opioids/alpha-2 agonists is preferable over targeted blood pressure treatment alone.
- Clinical status, including degree of sedation, level of monitoring available including ICU level, and response to treatments should be considered when determining treatment strategies.
- People with chronic co-exposure to fentanyl and medetomidine may be experiencing medetomidine withdrawal in addition to opioid withdrawal upon stopping use. Therefore,

individuals experiencing medetomidine withdrawal should also be monitored and treated for opioid withdrawal.

- **Contact the NYC Poison Center immediately at 212-POISONS or 212-764-7667** if you observe or learn of unusual overdoses or other adverse events. If possible, consider saving small amounts (at least half of a grain of rice) of substances associated with reported adverse events to submit to the NYC Health Department. The NYC Health Department drug checking team can send samples to our partner laboratory for testing and timely identification of substances.
  - The NYC Health Department drug checking team can be reached at [drugchecking@health.nyc.gov](mailto:drugchecking@health.nyc.gov).
  - For drug checking services and inquiries outside of New York City, the NYS Department of Health drug checking team can be reached at [drug.checking@health.ny.gov](mailto:drug.checking@health.ny.gov).

Sincerely,

Rebecca Linn-Walton, PhD, LCSW  
Assistant Commissioner  
Bureau of Alcohol and Drug Use

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### **Additional Resources**

- Several clinicians working in hospital-based settings have developed guidance around treating medetomidine withdrawal based on their experiences caring for people experiencing this syndrome. This includes the following resources:
  - [Medetomidine – Center for Addiction Medicine and Policy, Penn Medicine](#)
  - [Southern New Jersey Medication for Addiction Treatment Center of Excellence - Guidance for Managing Medetomidine Exposure](#)
  - [CDC Webinar: Clinical Implications of Medetomidine Mixed with Opioids](#)
  - [Philadelphia Department of Public Health Medetomidine Resource Bank](#)
  - [Philadelphia Department of Public Health Update June 2025: Responding to Overdose and Withdrawal Involving Medetomidine](#)
  - [Emerge in EM Podcast: Medetomidine toxicity and withdrawal with Dr. Michael Lynch](#)
  - [CDC Morbidity and Mortality Weekly Report \(MMWR\): Notes from the Field: Suspected Medetomidine Withdrawal Syndrome Among Fentanyl-Exposed Patients — Philadelphia, Pennsylvania, September 2024–January 2025](#)
  - [Philadelphia Department of Public Health Medetomidine Withdrawal Palm Card](#)
- Previous medetomidine-related NYC Health Advisories:
  - [NYC Health Advisory: Carfentanil and Medetomidine in the NYC Drug Supply](#)
  - [NYC Health Advisory: Poisoning by Medetomidine and Bromazepam in Suspected Opioid Overdose](#)
- Providers should familiarize themselves with resources available for people who use drugs in NYC, including:
  - [NYC Health Department Drug Checking Program](#)
  - [New York State Department of Health Community Drug Checking Program](#)

- Overdose response hotlines for people who are using drugs alone:
  - [Never Use Alone hotline](#): 877-696-1996
  - [SafeSpot hotline](#): 800-972-0590
- [Information and resources related to naloxone](#)
- [NYC syringe service programs](#)
- Treatment locators, including the [OASAS](#) and [SAMHSA](#) locators
- The 988 hotline, which patients can call, text, or chat (at [nyc.gov/988](https://nyc.gov/988)) to be connected to care or other resources
- [More overdose prevention resources for providers](#), including tools to talk to people about how to reduce their risk of overdose

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<sup>i</sup> Murphy L, Krotulski A, Hart B, Wong M, Overton R, McKeever R. Clinical characteristics of patients exposed to medetomidine in the illicit opioid drug supply in Philadelphia – a case series. *Clinical Toxicology*. 2025;63(6): 438–441. doi:10.1080/15563650.2025.2500601

<sup>ii</sup> Guidance for Managing Medetomidine Exposure. Southern New Jersey Medication for Addiction Treatment Center of Excellence. Accessed November 6, 2025. [https://www.snjmatcoe.org/\\_files/ugd/95ea9d\\_5088752700d34dac88df93272d20f394.pdf](https://www.snjmatcoe.org/_files/ugd/95ea9d_5088752700d34dac88df93272d20f394.pdf)