

August 2026 update: Significant changes in the composition of fentanyl samples

September 4, 2026

Over the month of August, [Toronto's Drug Checking Service](#) has observed notable changes in the composition of fentanyl samples donated to our program. We are sharing this update with the community to inform those who cannot directly access our service, as well as community health workers, clinicians, first responders, public health units, policy makers, researchers, and others.

- 1. 7.1% was the [average amount](#)¹ of fentanyl-related drugs² found in fentanyl samples**, increasing from 4.3% – 5.0% between May and July 2026. This is the highest average amount¹ (or concentration) of fentanyl-related drugs² we have found in fentanyl samples since February 2024 and was largely due to a rise in the average amount¹ of [fluorofentanyl](#). Higher amounts of fentanyl-related drugs² can increase the risk of overdose and make it more difficult for people who use fentanyl to anticipate the effects they may experience.
- 2. 87% (65 of 75) of fentanyl samples contained multiple high-potency opioids**, a sharp increase from 51% (69 of 118) in May 2026. Fentanyl and fluorofentanyl were the most commonly found high-potency opioids, followed by [methyلفentanyl-related drugs](#). Using high-potency opioids in combination increases the risk of overdose and greater than normal doses of naloxone may be required to reverse an overdose.
- 3. 93% (70 of 75) of fentanyl samples contained [medetomidine](#). This is the highest proportion of fentanyl samples containing medetomidine we have observed to date.** Medetomidine is a potent veterinary tranquilizer and central nervous system depressant that can cause prolonged sedation and dangerously suppress vital signs, such as blood pressure and heart rate. By contrast, medetomidine withdrawal can cause fast heart rate, dangerously high blood pressure, as well as uncontrollable nausea and vomiting, and may require hospital-based care.
- 4. 35% (26 of 75) of fentanyl samples contained at least one benzodiazepine-related drug**, decreasing from 40% – 50% between February and July 2026. Despite this decrease, more than one-third of samples still contained at least one benzodiazepine-related drug. Benzodiazepine-related drugs are central nervous system depressants that can cause respiratory depression (i.e., slow breathing), particularly when used in combination with opioids. The proportion of fentanyl samples that contain benzodiazepine-related drugs has been highly volatile since our service launched in 2019. Suddenly stopping the use of

benzodiazepine-related drugs, when they rapidly leave the fentanyl supply, could lead to life-threatening withdrawal.

The combination of high-potency opioids, benzodiazepine-related drugs, and medetomidine – all of which are central nervous system and/or respiratory depressants – increases the risk of harms and complicates overdose response.

If you suspect an opioid-related overdose involving medetomidine and/or benzodiazepine-related drugs, use naloxone and prioritize breathing. Naloxone will reverse the effects of opioids but will not reverse the effects of medetomidine or benzodiazepine-related drugs. Someone may therefore remain sedated or unresponsive after naloxone has reversed the opioid-related effects.

People who use fentanyl may wish to consider using a smaller test dose first, carrying multiple doses of naloxone, using with someone else, and getting their drugs checked. Review [our tips and help](#) to reduce the harms associated with using drugs from an unregulated supply.

We are continuing to monitor these trends and will keep the community informed as we learn more. To interact with our data, visit www.drugchecking.community.

Notes

1 | Average amount: We arrange the amounts of a substance found as a proportion of the total fentanyl drug sample from smallest to largest, determine the median (i.e., the middle number), and use that number as the “average”. For more information, view our [amount of drugs found graph](#).

2 | Fentanyl-related drugs: We have combined the amounts (or concentrations) of fentanyl-related drugs we quantify (fentanyl, para-fluorofentanyl, and ortho-methylfentanyl) in a sample to report the average amount¹ of fentanyl-related drugs in a sample. We have combined the amounts of these fentanyl-related drugs because they are considered to be roughly the same strength.

About us: Ontario’s Drug Checking Community is a national authority and primary source of timely and comprehensive data on Canada’s unregulated drug supply. This public health and safety program, which is the provincial expansion of [Toronto’s Drug Checking Service](#), analyzes samples of drugs and used drug equipment donated by people who use drugs with [gold standard mass spectrometry technologies](#) at the Centre for Addiction and Mental Health (Clinical Laboratory and Diagnostic Services) or St. Michael’s Hospital (Department of Laboratory Medicine). Technologies used and methods developed from checking tens of thousands of the most complex samples are the best currently available to communities in Ontario for checking unregulated opioids. This is critical because the contamination and unpredictability of the unregulated opioid (and, specifically, fentanyl) supply continues to be the primary driver of fatal and non-fatal drug poisoning, among other harms. The [program’s findings](#) are translated and publicly available to prevent drug-related harm and inform evidence-based responses to the ongoing toxic opioid supply crisis, which include prevention, harm reduction, treatment and recovery, and community safety efforts.

Acknowledgements: We acknowledge the members of our communities that have lost their lives – both in the ongoing toxic opioid supply crisis and long before.

We acknowledge that racialized communities and survivors of colonization are disproportionately impacted by the toxic opioid supply crisis.

We acknowledge that we operate on Indigenous land, which is home to many diverse First Nations, Inuit, and Métis peoples. Our program is coordinated from Toronto, which is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee, and the Wendat peoples.

We know that many of the samples we check are linked to fatal or non-fatal overdose, as well as adverse health events – we acknowledge the people and pain behind the data we share.

We acknowledge that our work is only possible – and we only have access to this data – because people who use drugs donate their drugs to our program in an effort to reduce the harms associated with using unregulated substances and facilitate community-led drug market monitoring and education. We are incredibly fortunate to be trusted by people who use drugs throughout the province.

We acknowledge our collection sites, which are community agencies that are deeply committed to bettering the lives of people who use drugs, have existing and trusting relationships with people who use drugs, and truly understand what it means to provide care and reduce harm. We acknowledge that almost all of our samples have been collected by supervised consumption sites. We acknowledge the collection sites lost by our program due to the closure of their supervised consumption service.

Contact us: A small central team operates from within the Drug Checking Unit at MAP Centre for Urban Health Solutions, Unity Health Toronto. **We are committed to ensuring our public health and safety program adds value to the communities it serves. If you have any questions, comments, or feedback, please get in touch.**

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