OVERDOSE RESPONSE STRATEGY

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Connecticut Overdose Response Strategy: Kratom Situational Brief

Executive Brief for Commissioner Ronnell Higgins
Department of Emergency Services and Public Protection
Prepared by: Connecticut Overdose Response Strategy Team
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Key points

- Kratom (*Mitragyna speciosa*) is a psychoactive botanical rather than a single chemical compound, and commercial products vary substantially in strength, formulation and purity.
- Concentrated extracts and 7-hydroxymitragynine (7-OH) may present materially different and potentially higher risks than traditional whole-leaf products.
- Most scientific literature focuses on kratom leaf alkaloids and extracts. Connecticut's 2026 scheduling action applies broadly to *Mitragyna speciosa*, including its leaves, stems, extracts and the alkaloid 7-hydroxymitragynine.
- Based on the mortality data used for this brief, mitragynine was identified in approximately 1.0% to 1.8% of Connecticut overdose deaths from 2021 through 2025, suggesting the need to continued surveillance while indicating kratom is currently not a leading driver of fatal overdose in the state.
- Connecticut Overdose Response Strategy (ORS) assessment: Based on currently available data and partner reporting, the Connecticut ORS team does not currently assess kratom as a significant threat within Connecticut's fatal overdose landscape at this time but will continue monitoring mitragynine and related substances.

OVERVIEW

Kratom is the common name for *Mitragyna speciosa*, a tropical plant native to Southeast Asia. In the United States, it is sold in powders, capsules, teas, beverages, extracts and other concentrated preparations. The plant contains numerous alkaloids, but the two most discussed are mitragynine and 7-hydroxymitragynine, also known as 7-OH. The literature often describes kratom as a gray-zone substance that sits between a botanical product, psychoactive substance and opioid-adjacent product, while the retail market remains highly variable and incompletely standardized (Eastlack et al., 2020; Prevete et al., 2023; Swogger et al., 2022).

Most published research centers on leaf material and alkaloid content, not stem-only material. That distinction matters because Connecticut's scheduling action is broader than the literature base, covering *Mitragyna speciosa*, including its leaves, stem and any extracts. From a policy perspective, that broader framing is reasonable because commercial kratom products are

frequently marketed in forms that do not allow users or regulators to distinguish clearly between raw plant material, blended botanical products and concentrated extracts (Connecticut Department of Consumer Protection [DCP], 2026a, 2026b; U.S. Food and Drug Administration [FDA], 2025b).

HOW KRATOM AFFECTS THE BODY AND BRAIN

Current literature consistently describes kratom as dose-dependent. Lower-dose use is more often associated with stimulant-like effects such as increased alertness, energy and sociability. Higher-dose use is more often associated with pain relief, euphoria, relaxation and sedation. These effects should not be treated as precise dose bands because commercial products vary substantially in alkaloid concentration, purity, extraction method and possible adulteration (Eastlack et al., 2020; Hanapi et al., 2021; Prevete et al., 2023).

Pharmacologically, kratom is best understood as a mixed-action substance. Its principal alkaloids act as muopioid receptors and also interact with adrenergic and other receptor systems. Repeated use can produce tolerance, dependence and withdrawal, particularly with high-potency products, frequent use or polysubstance exposure. The dependence risk is real enough that kratom should not be characterized as a harmless wellness product, even though it should also not be treated as identical to heroin or prescription opioids (Hanapi et al., 2021; Henningfield et al., 2023; Smith et al., 2022; Swogger et al., 2022).

The newer 7-hydroxymitragynine product market raises additional concern. The Food and Drug Administration (FDA) has distinguished concentrated 7-hydroxymitragynine products from natural kratom leaf products and has described 7-hydroxymitragynine as a potent mu-opioid receptor agonist with significant abuse liability. The FDA has also warned that concentrated 7-hydroxymitragynine products are being sold in consumer-friendly forms such as tablets, gummies, drink mixes and shots, sometimes with labeling that may obscure their true potency or composition (FDA, 2025a, 2025b).

CONNECTICUT LEGAL AND REGULATORY UPDATE

Public Act 25-101 directed the Connecticut Department of Consumer Protection (DCP) to advance scheduling updates for several emerging substances, including kratom and 7-hydroxymitragynine. On February 24, 2026, the Legislative Regulation Review Committee approved regulations designating *Mitragyna speciosa*, including its leaves, stem and any extracts, and 7-hydroxymitragynine as Schedule I controlled substances in Connecticut. DCP subsequently advised businesses that the change would take effect on March 25, 2026 (Connecticut General Assembly, 2025; DCP, 2026a, 2026b).

In practical terms, the Schedule I designation places kratom and 7-hydroxymitragynine in Connecticut's highest control category, reserved for substances regarded as having high abuse

potential and no currently accepted medical use in treatment in the United States. DCP guidance further advised businesses to remove affected products from shelves and destroy or return them to wholesalers before the effective date (DCP, 2026b).

CONNECTICUT OVERDOSE DEATHS INVOLVING MITRAGYNINE

Connecticut mortality data show a persistent, though relatively small, annual number of overdose deaths in which mitragynine appeared in the cause-of-death record. Across the five years shown, the annual count ranged from 11 to 23 deaths, representing 1.0% to 1.8% of total overdose deaths. These figures do not suggest that kratom is a significant driver of Connecticut's overall fatal overdose landscape. Cases in which mitragynine is identified in the cause of death typically involve polysubstance exposure and complex toxicological profiles. These patterns are consistent with polydrug use patterns observed within Connecticut's substance-using population. The Connecticut ORS team and its partners will continue to monitor mitragynine, along with other substances affecting Connecticut's evolving drug landscape.

Year	Total deaths	Mitragynine in COD	Percent of deaths
2021	1,524	19	1.2%
2022	1,452	23	1.6%
2023	1,328	13	1.0%
2024	982	11	1.1%
2025	899	16	1.8%

Source note: Data provided by Connecticut Department of Public Health and Connecticut Office of Chief Medical Examiner 2026

CONNECTICUT ORS TEAM ASSESSMENT

The Connecticut ORS team acknowledges the decision by the State Legislature and Connecticut DCP to schedule kratom and its derivatives as Schedule I controlled substances. At the same time, based on the Connecticut ORS team's current review of mortality data, toxicology patterns and the broader illicit drug environment, kratom does not presently appear to be a major driver of fatal overdoses in Connecticut.

Across the mortality data reviewed, mitragynine was listed in 1.0% to 1.8% of overdose deaths from 2021 through 2025. More often, kratom appears within broader polysubstance toxicity profiles than as an isolated driver. That pattern is important because Connecticut's substance use

landscape is dominated by polydrug use, meaning the repeated or overlapping use of multiple substances within the same risk environment.

The Connecticut ORS team recognizes the importance of continued surveillance, toxicology awareness, public messaging and interagency coordination related to kratom and 7-hydroxymitragynine, while also emphasizing that Connecticut's primary fatal overdose threats remain fentanyl and stimulant-related harms occurring within polydrug use patterns. Based on the mortality figures, overdose deaths declined from 1,524 in 2021 to 899 in 2025, a decrease of approximately 41%. That progress reflects substantial work by the Connecticut Department of Public Health, the Department of Mental Health and Addiction Services, the Department of Consumer Protection, healthcare and emergency response partners and community-level organizations across the state. Even with that progress, fentanyl continues to be the leading driver of overdose mortality in Connecticut, followed by harms associated with long-term stimulant use and stimulant-fentanyl polydrug exposure.

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