Unregulated Highs: Kratom

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Healthy Neighborhoods
Prevention Research Center for Healthy Neighborhoods
at Case Western Reserve University

A Public Health Blind Spot

In recent years, there has been an increase in stores selling high-potency, unregulated products like hemp (e.g., Delta-8), kratom (a quasi-opiate), and other psychoactive products (e.g., hallucinogens). Despite their potent effects, these products are being sold legally, falling outside most regulatory frameworks, and are often sold alongside snacks and energy drinks with few, if any, age purchasing requirements. In this *Unregulated Highs* series, we provide key information about what these products are, how they came to be, and what our local Cleveland data show.

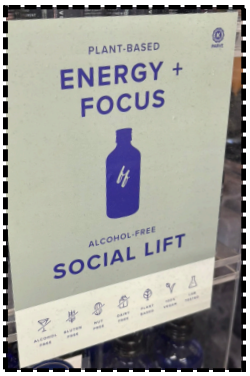
What is Kratom?

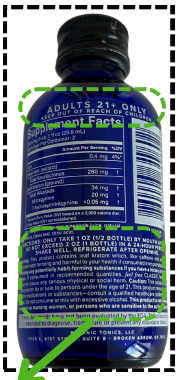
Kratom is a plant-based substance derived from the leaves of a tree native to Southeast Asia. Its active compounds--**mitragynine** and **7-hydroxymitragynine (7-OH)**--bind to opioid receptors in the brain. At low doses, kratom can produce a stimulant-like effect, while at high doses, it can produce an opiate-like effect. Notably, **7-OH has much higher potency** than mitragynine and thus serves as a key mediator in producing the opiate-like effect.[1] However, **7-OH does not naturally occur in abundance** in the plant, which means that those products with high concentrations of 7-OH were likely made in a lab to make it more economically salient.[2] These particular formulations can be more potent than morphine.[3]

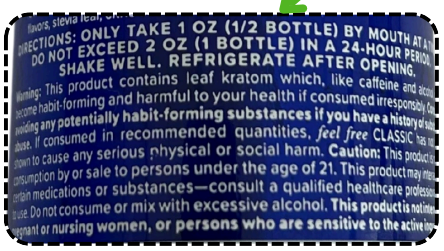
What do Products Look Like?

Kratom products are predominantly sold as **powders, capsules, or tinctures**, with growing availability of infused kratom vapes or combustibles. Some use descriptors like 'Mit' to reference the active compound, mitragyna, while others may simply list it as an herbal supplement. Products are typically marketed as **natural dietary supplements** (e.g., "Plant-Based," "Herbal," "Alcohol-Free," "Gluten-Free") a**nd/or performance enhancers** (e.g., "Energy+Focus," "Feel Great," "Social Lift").

Limited oversight can affect the accuracy and clarity of product labels, leading to consumer uncertainty about the product's nature, dosage, and risks. In Ohio, **these products have no age-based purchase restrictions, making them readily available to both youth and adults.** Even if some labels—like the one shown on the right—indicate that products are "for adults 21+ only," there are currently no penalties for selling them to minors.







What are the Risks?

Kratom, in all its forms, poses **addictive risks and withdrawal symptoms,** especially with long-term use. Products containing higher concentrations of 7-OH products, however, pose more substantial health risks, including overdose.[3] In fact, overdose deaths involving kratom rose from 866 deaths in 2020 to 1,151 in 2023.[4] A Florida study found that the odds of dying from drug-related intoxication were 7.6 times greater among those exposed to kratom compared to those who were not exposed to it.[5]

Kratom: A Cleveland Snapshot

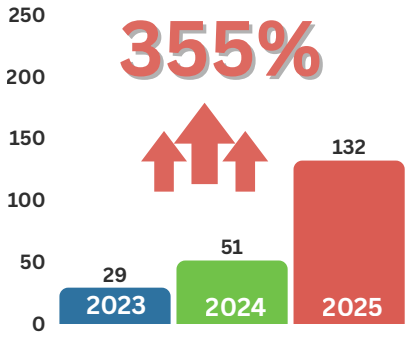
Retail Availability in Cleveland, Ohio

In 2023, the PRCHN expanded its Cleveland Inventory of Food and Tobacco Retailers to include the availability of kratom in tobacco retailers such as gas stations and corner stores. At that time, only 29 of the observed retailers sold kratom products. However, in 2025, this number had grown to 132, or 33% of all tobacco retailers. This represents **a growth of 355% in the number of retailers who sell kratom products**.

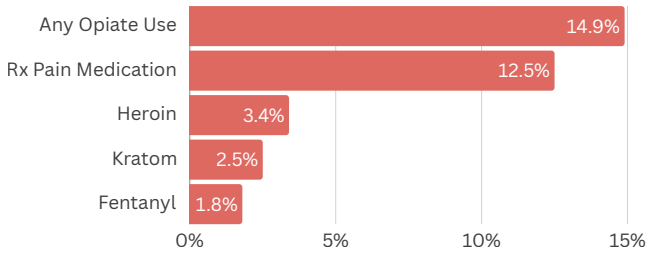
Adult Use of Kratom

In the 2025 Cleveland Health Survey, 15% of adults (ages 18 and older) said they had ever used any opioid (e.g., misuse of a prescription pain medication, use of heroin, fentanyl or kratom). Overall, **about 3% of adults said they had ever used kratom--23% of whom said they had used it in the past year**.

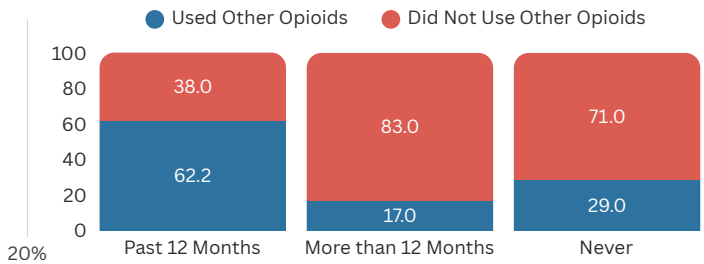
The prevalence of concurrent use (or past year use) of other opioids was high (62%) among those who had used kratom in the past year, compared to those who had used kratom more than 12 months ago (17%), as well as those who had never used kratom (29%).



The number of stores that sell kratom has **increased by 355% since 2023.**



2.5% of Cleveland adults said they had used kratom at least once in their life.



Those who used kratom in the past 12 months were about **2x as likely to have used other opioids** in the past 12 months compared to those who had never used kratom.

References:

1. Kruegel AC, Uprety R, Grinnell SG, Langreck C, Pekarskaya EA, Le Rouzic V, Ansonoff M, Gassaway MM, Pintar JE, Pasternak GW, Javitch JA. 7-Hydroxymitragynine is an active metabolite of mitragynine and a key mediator of its analgesic effects. ACS central science. 2019 May 29;5(6):992-1001.
2. University of Colorado Anschutz. (2025). What is 7-OH, and why is it being targeted in kratom products: An expert explains the synthetically derived part of the kratom leaf and its dangerous and addictive potential. Available from: https://news.cuanschutz.edu/news-stories/what-is-7-oh-and-why-is-it-being-targeted-in-kratom-products
3. U.S. Food and Drug Administration. (2025). 7-Hydroxymitragynine (7-OH): An assessment of the scientific data and toxicological concerns around an emerging opioid threat. Available from: https://www.fda.gov/media/187899/download?attachment
4. Centers for Disease Control and Prevention. State Unintentional Drug Overdose Reporting System (SUDORS). Final Data. Atlanta, GA: US Department of Health and Human Services, CDC. Available from: https://www.cdc.gov/overdose-prevention/data-research/facts-stats/sudors-dashboard-fatal-overdose-data.html
5. Suriaga AA, Tappen RM, McCurdy CR, Newman D, Grundmann O, Kelly JF. The Associations of Kratom (Mitragynine), Opioids, Other Substances, and Sociodemographic Variables to Drug Intoxication–related Mortality. Journal of Addiction Medicine. 2024 Nov 8:10-97.

Data Sources: (1) 2025 Cleveland Health Survey conducted by the Prevention Research Center for Healthy Neighborhoods in collaboration with the Cleveland Department of Public Health. Methodology is available at https://prchn.org/wp-content/uploads/2025/04/2025-Cleveland-Health-Survey-Methodology-Report.pdf Results are available at: https://prchn.org/wp-content/uploads/2025/03/2025-Cleveland-Health-Survey-Overall.pdf (2) 2025 Cleveland Inventory of Food and Tobacco Retailers is conducted by the Prevention Research Center for Healthy Neighborhoods; more information is available at: https://prchn.org/ciftr/.

Image Sources: Images provided by PRCHN staff and/or students.

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