



# Kratom

By: Kailyn Tomilin, MPH

## Background

Kratom, also known as *Mitragyna Speciosa*, is a plant native to Southeast Asia which contains the alkaloid mitragynine<sup>1</sup>. Kratom is marketed as a dietary supplement and is sold over the counter in smoke shops, gas stations, and from online retailers<sup>1</sup>. Kratom has been used for various purposes, whether for pain management, recreational use, or to treat symptoms relating to opioid use disorder (OUD) and withdrawal<sup>1</sup>. **According to the 2022 National Survey on Drug Use and Health, among people aged 12 or older in 2022, 1.9 million people used kratom in the past year<sup>2</sup>.**

The U.S. Food and Drug Administration found inadequate evidence supporting kratom's use as a dietary supplement or food additive and has not approved any medication containing kratom or its compounds for any purpose<sup>3</sup>. The Drug Enforcement Agency (DEA) lists kratom as a Drug or Chemical of Concern<sup>3</sup>. However, since the DEA has not listed kratom under the Controlled Substances Act, it remains accessible to individuals in states without regulations or prohibitions<sup>3</sup>.

## Mechanism

Kratom consists of two chemical compounds, mitragynine and 7-OH-mitragynine<sup>3</sup>. These two chemical compounds act on the brain by binding to mu-opioid receptors<sup>3</sup>. According

to FDA research, kratom's mechanism of action also affects other areas of the brain including dopamine, serotonin, norepinephrine, and kappa opioid receptors<sup>3</sup>. The methods of consumption include ingesting it in capsule or tablet form, chewing the leaves, or using the leaves to make tinctures or tea<sup>1</sup>. Some of the physical effects of kratom, like pain relief, contribute to individuals using it in an attempt to mitigate symptoms related to opioid use and withdrawal.

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## Effects

Reported effects of kratom differ from person to person and depending on the dosage. According to the National Institute on Drug Abuse (NIDA), people who use kratom report both stimulant-like effects such as increased energy and heart rate as well as effects that are similar to opioids and sedatives like relaxation and confusion<sup>3</sup>. **Although there is a lack of concrete research supporting this, many people who use kratom report that smaller doses of kratom produce stimulant-like effects and larger doses produce opioid- or sedative-like effects<sup>3</sup>.**

Due to kratom being a newer drug, there is a lack of research on the long-term effects of its use. According to some reports, long term use of kratom, especially in higher dosages, can lead to liver problems or death<sup>4</sup>. Some of the withdrawal symptoms associated with kratom include disrupted sleep, jerking limb movements, tremors, abdominal pain, sweating, depression and anxiety<sup>5</sup>.

## Treatment

**A risk of dependence with prolonged use has been demonstrated in the literature<sup>5</sup>**. This is due largely to kratom's effect on receptors in the brain, similar to

opioids and other substances with addictive properties<sup>5</sup>. There have been a few studies showing success in treating kratom dependence and withdrawal symptoms with buprenorphine. One study described an individual with OUD whose polysubstance use included several daily doses of kratom<sup>6</sup>. After stopping usage of other substances, they were unable to stop using kratom<sup>6</sup>. The study reports that after sublingual buprenorphine induction, the individual's withdrawal symptoms dissipated, and they were able to stop kratom use<sup>6</sup>.

Although many individuals report using kratom to treat opioid use disorder, **there is not enough evidence currently to substantiate claims of kratom being a viable treatment option<sup>5</sup>**.

## Resources

To learn more about opioids and other drugs, explore more resources on the MATTERS website. Visit [www.mattersnetwork.org](http://www.mattersnetwork.org) or [click here to visit our education page](#).

## References

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