

# Kratom

*Mitragyna speciosa*

## All in the compounds

Two compounds in kratom leaves, **mitragynine** and **7- $\alpha$ -hydroxymitragynine**, interact with opioid receptors in the brain, producing sedation, pleasure, and decreased pain, especially when users consume large amounts of the plant. When kratom is taken in small amounts, users report increased energy, sociability, and alertness instead of sedation. However, kratom use can cause uncomfortable and sometimes dangerous side effects including:

- Nausea, itching, sweating, dry mouth, constipation, increased urination, loss of appetite, seizures, and hallucinations.
- More serious adverse effects include: hypothyroidism, hypogonadism, kratom-induced hepatotoxicity, CNS effects causing seizure and coma or posterior reversible encephalopathy syndrome, acute respiratory distress syndrome, overdose, psychosis, and death.

Commercial forms of kratom are sometimes laced with other compounds that have caused deaths. In 2017, the FDA identified at least **44 deaths related to kratom**. The FDA reports that many of the kratom-associated deaths appeared to have resulted from adulterated products or taking kratom with other potent substances. However, several deaths have been attributed to kratom use alone.

## A tropical tree native to Southeast Asia

with leaves that can have psychotropic properties. Kratom is mostly used as a pill or capsule, while some chew the leaves, smoke the leaves, brew the dried or powdered leaves as a tea, or eat in food. Kratom is not currently illegal at the federal level nor is it regulated by the FDA. Although many states have banned its sale, consumers are easily able to circumvent such bans by ordering on the internet.

## Kratom and addiction

Some users have reported becoming severely addicted to kratom. Like other drugs with opioid-like effects, kratom can cause dependence, which means users will feel physical withdrawal symptoms when they stop taking the drug:

- Physical withdrawal symptoms arising from kratom addiction include muscle aches, insomnia, irritability, hostility, aggression, emotional changes, runny nose, and jerky movements.
- Kratom-associated neonatal abstinence syndrome (KANAS) has been reported among infants exposed to kratom in utero. Symptoms of KANAS include tremors, irritability, excessive high-pitched crying, and muscle stiffness.
- While there are no specific medical treatments for kratom addiction, some people seeking treatment have found behavioral therapy to be helpful. Scientists need more research to determine how effective this treatment option is.
- In recent years, some people have used kratom as an herbal alternative to medical treatment in attempts to control withdrawal symptoms and cravings caused by addiction to opioids or to other addictive substances such as alcohol. There is no scientific evidence that kratom is effective or safe for this purpose.

### Sources:

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