

WHAT IS KRATOM?

Kratom, sometimes referred to as “gas station heroin,” is the common name for the leaves of the tropical tree *Mitragyna speciosa*, native to Southeast Asia.

- In low doses, kratom typically acts like a stimulant (increased energy, alertness); in higher doses, it can have sedative or opioid-like effects.
- In the United States, kratom is not approved by the U.S. Food and Drug Administration (FDA) for any medical use, dietary supplement use, or as a food ingredient.
- Many kratom-products sold commercially (powders, capsules, extracts, gummies), sold in common places where kids may have easy access (online, gas stations, convenience stores), have no standard dosing, variable potency, and may be contaminated or adulterated.
- A particularly concerning derivative is 7-hydroxymitragynine (7-OH), which in high concentrations is much more potent and has been linked with serious health outcomes.

Why this matters: Because kratom products are unregulated and carry uncertain potency and purity, they pose significant risk—especially when users assume “natural” means “safe.”

HOW DOES IT WORK?

- The two most studied alkaloids are mitragynine and 7-hydroxymitragynine (7-OH). Mitragynine binds to the brain’s mu-opioid receptors and effects serotonin, dopamine, and norepinephrine systems.
- In lower amounts, kratom may produce stimulant-type effects (alertness, talkativeness); in moderate to high amounts, it behaves more like an opioid (sedation, euphoria, pain relief, slowed breathing).
- Because dosing is inconsistent and the chemical make-up can vary greatly, the effect is unpredictable: what one user experiences may differ drastically from another.
- Chronic use can lead to tolerance (needing more to get the same effect) and dependence (withdrawal symptoms when stopping). Recent studies show that kratom users may meet criteria for a “kratom use disorder.”



SHORT-TERM EFFECTS

- At lower doses: increased energy, sociability, alertness.
- At higher doses: sedation, euphoria, pain relief, slowed breathing, constricted pupils.
- Other reported effects: nausea, vomiting, dry mouth, sweating, itching, constipation.
- Serious immediate risks include: confusion, agitation, seizures, loss of consciousness, respiratory depression.
- Contaminated or adulterated products (especially those with high 7-OH) increase the risk of overdose, even when users believe they are taking a “natural leaf.”

LONG-TERM EFFECTS

When use continues for months or years, the following may occur:

- Tolerance: needing higher or more frequent doses to achieve effect.
- Dependence: not being able to stop without feeling strong withdrawal symptoms (see next section).
- Physical health issues: weight loss, dental problems, constipation, insomnia, liver toxicity.
- Mental health issues: mood swings, anxiety, depression, possible psychosis in vulnerable individuals (though cause-effect is not always clear).
- Risk of interacting with other drugs: because kratom affects multiple brain systems, combining it with alcohol, opioids, sedatives or stimulants increases danger.

WITHDRAWALS

Stopping heavy use of kratom—especially after prolonged high-dose use—can produce withdrawal symptoms like those seen with opioid withdrawal. Symptoms may include:

- Restlessness, agitation, anxiety
- Muscle aches, bone pain
- Tremors, yawning, sweating
- Nausea, vomiting, diarrhea
- Insomnia, fatigue
- Cravings for the substance

Because kratom is not well-regulated, withdrawal severity varies substantially among users and depends on dose, frequency, duration, product purity, and individual physiology. Recent U.S. clinical reports note the emergence of “kratom use disorder” and highlight the need for medical supervision.



WHAT DOES IT DO?

In short:

- Kratom is not a safe substitute for medically-supervised treatments of pain, anxiety or opioid dependence.
- The evidence for therapeutic benefit is extremely limited; the FDA says available information is insufficient to show kratom is safe or effective in any medical use.
- Many users and marketers claim kratom helps with pain relief or opioid withdrawal; while anecdotal reports exist, reliable clinical data is lacking.
- Because of variable potency, contamination risk, and the possibility of opioid-like effects (especially with high-potency forms or 7-OH-enhanced products), kratom can lead to serious health problems including overdose, dependency, and death (especially when used with other substances).

If you’re using kratom or considering it—including for self-medication of pain, mood, or addiction—talk with a healthcare provider. Because the marketplace is unregulated, and because emerging data show risks of dependence, withdrawal and serious health events, this is not a harmless herbal remedy.