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**KRATOM BOLO**

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## **Kratom Use Expands Into All Fifty States: Important Information For Journal Readers**

Nationwide polls have identified Kratom as an important substance that has emerged as part of the world wide explosion in the abuse of what have been called "designer drugs." Although Kratom is a naturally occurring alkaloid, it has been lumped in with the substances like "K2-Spice," "bath salts", "glass cleaners" and "novelty powders" as a new and unregulated psychotropic drug. Because of the drug's pharmacologic properties, Kratom has taken on greater relevance for addicts, treatment professionals and drug court programs. Kratom has rather silently established itself as a substance that can be utilized for a variety of illicit purposes. In as much as it is an opiate, the drug can substantially effect the experience of prescription opiate (oxycodone, hydrocodone, methadone) abusers who may be weathering the painful effects of narcotic withdrawals. For opiate dependent users, Kratom is a drug that can be utilized to offset withdrawals. Alternatively, it can be taken concurrently with prescription opiates to enhance traditional narcotic effects. In its own right, and in an appropriate strength, the drug is capable of triggering notable euphoric effects. It is a destination drug in that sense. Internet sites are replete with stories about how Kratom can be employed to titrate off of prescription opiates and avoid positive drug tests. Kratom is not a component of any standardized drug testing panel.



This drug, called *Kratom*, comes from a tree indigenous to Thailand and Malaysia. Used for hundreds of years both medically and recreationally as a sedative and a stimulant, it was made illegal in Thailand in 1946. Under current law, Kratom is also illegal in Bhutan, Australia, Finland, Denmark, Poland, Lithuania, Malaysia and Burma. Thought to have mildly



psychoactive properties, Kratom leaves can be chewed, smoked (Dried leaves), brewed into tea, or made into pills (Capsules). The tree, *Mitragyna speciosa*, can grow to heights exceeding 50 feet in its natural habitat. Its leaves are dark green, with green or red veins (Depending on variety) and grow to seven inches. Reportedly, the leaves bearing green veins are more potent than leaves bearing red veins. Seasonally,

when in bloom, the tree sports clusters of yellow flowers. In 1943, the Thai government attempted a national ban on Kratom by making it illegal to plant new trees and requiring existing trees be cut down. Since the indigenous tree grew wild in much of the country, it was impossible to enforce the ban.

Although there are several alkaloids in Kratom, the primary active constituents are believed to be the *indole alkaloids* 7-Hydroxymitragynine and Mitragynine. Alkaloids are chemical compounds that occur naturally in many plants (Poppy), bacteria, and fungi (Psilocybin), many of which have *pharmaceutical*, or *medicinal* properties. Perhaps the most well known naturally occurring alkaloids are caffeine, nicotine, morphine, and cocaine. Through a chemical process, specific alkaloids can be isolated and separated to be used for medical purposes. Kratom, which acts on opioid receptors in the brain, has been used medically to prevent withdrawal symptoms on opiate abusers. It is thought that the ingestion of mitragynine over a short period of time would lessen the dependence on opiates while mitigating the cravings and withdrawal symptoms, making addiction recovery easier.

The effects of Kratom appear rather contradictory, it acts as both a sedative and as a stimulant. 7-hydroxymitragynine is said to have the strongest sedative effect with more potent analgesic effect than morphine. It is interesting to note that the "low dose" effects from the chewing of whole Kratom leaves are described to be stimulating, while "high dose" effects of Kratom extracts are more akin to a narcotic analgesic (i.e., opium-like). The onset of the drug is rapid (5-10 minutes) and the effects last several hours. Although 7-hydroxymitragynine and mitragynine are structurally similar to tryptamines, their pharmacology is quite different, acting primarily as mu-opioid receptor agonists (analgesics). Perhaps the most commonly known tryptamines are serotonin (neurotransmitter) and melatonin (hormone), both of which help a human body's internal clock in the establishment of *circadian rhythm*.

Kratom products abound on the Internet, most appear to be extracts of the plant's leaf. There are some sites that cater the actual Kratom leaf. But someone who is

taking Kratom in one of its forms is likely to exhibit symptoms of someone under the influence of a low dose opiate. Because it is a mu receptor agonist, evaluators should expect to find constricted pupils (miosis), a sluggish to no reaction of the pupil to light, slowed Romberg clock and a slow deliberate gait and pattern of speech. The span of psychogenic effects for Kratom is 2-3 hours. Kratom use can become chronic for those users who are predisposed to addiction or for those who have histories of prescription opiate abuse. Kratom can be addicting and it can cause withdrawals for those users who suddenly stop taking the drug following extended periods of abuse.



So what does this all mean for MEDTOX Journal readers? For those who work with the addicted and those in recovery, Kratom is undoubtedly a serious threat. As a legal and unregulated substance, Kratom is a potential subterfuge to for all who are involved in programs that treat opiate dependency. It's a drug that can be used by addicts to perpetuate their disease and avoid accountability. In a larger sense, Kratom is a serious threat to all programs that seek sober living as a prime objective. It is a drug that can be abused with relative impunity. For those seeking employment or those who place drug testing as a condition of employment, Kratom abuse goes undetected. In that sense, Kratom poses a real threat to drug-free workplace objectives. Readers should be familiar with the signs associated with Kratom abuse. Readers should also employ drug testing protocols as necessary that include Kratom and its primary metabolites as part of a broad based screening strategy. Especially in cases where prescription opiates (oxycodone, hydrocodone), heroin and methadone are drugs of choice, Kratom testing is advised.

MEDTOX as the only major U.S. laboratory currently offering Kratom testing services, interested readers should contact a MEDTOX sales representative for further information. Readers are urged to call Mr. Andrew Gilberts at 661-775-6965 for more information. More information about Kratom abuse may be obtained by attending MEDTOX's designer drug update course that will be offered by webinar in early May. Stay tuned to the MEDTOX Journal for details associated with that course. Major changes and enhancements have been undertaken in the DAR webinar program, including a new discounted pricing structure for MEDTOX customers.