



# Informational Bulletin

## Kratom

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Kratom is a new over the counter “fad” supplement that is gaining momentum in our communities. By understanding Kratom we can better prepare ourselves as providers when faced with patients taking this substance. Kratom (*Mitragyna Speciosa*) is a tropical tree found in areas of Southeast Asia and was formally identified in 1839 by botanist Pieter Korthals. It has been used in these areas by farmers as a stimulant (similar to caffeine) since the 19th century. Although the pharmacokinetics are still a topic of debate, because of its reported effects, Kratom has gained popularity in an out of the medical community worldwide.

### What is Kratom?

Kratom is used for a variety of reasons. Like most plants it contains many compounds, but mitragynine is most abundant. Mitragynine and 7-hydroxmitragynine (4x as potent as mitragynine) have been identified as major contributors to the effects of Kratom, both are opioid agonists. Kratom also has A2 agonist (think clonidine - decreased sympathetic outflow), serotonin antagonism (think trazodone - sedation), and adenosine antagonism (think caffeine - sympathomimetic) activity. Although short lasting, Kratom has gained popularity when taken for its stimulation effects. However, it is also being taken for sedation, euphoria, enhanced work output, pain relief, and fatigue reduction. These desired effects all depend on the strain and amount of Kratom being taken.

There are three different strains known as; red vein, white vein, and green vein. Each strain is reported to have its own effects on the body because of the individual chemical makeup. Red vein is taken for its effects of sedation, white vein for its reported stimulation, and green vein for the combination of the two.

### How is it used?

The most common way Kratom is consumed is orally, however it can also be smoked. The leaves of the plant are dried and ground into a powder to be pressed into pills or ingested as a tea. When taken this way, the onset of effects are within 15 minutes and can last 2-4 hours. Reportedly, lower doses are for stimulation and higher doses are for sedation. For reference, light doses are considered to be 2-4 grams, the common dose is 3-5 grams, and a strong dose is 5-8 grams. The higher, sedation dosing is what we are most concerned about.

Kratom can be found at local smoke shops including locations in Warrenton. The types of formulations and brands varies widely, with extensive charts and guides available at the consumer locations. However, the online marketplace is the main go-to for Kratom sales and education. This unregulated marketplace unfortunately exposes potential patients to dosing guidelines that could be dangerous; especially those trying to achieve the same effects as opioid use.

### The Great Debate

The claims about the benefits of certain doses of Kratom are celebrated by many who feel they require the supplement daily for numerous reasons including self-weaning from narcotics and/or pain management. The Commonwealth of Virginia has not imposed regulations on the Kratom industry at this time. Currently, it is legal to manufacture, distribute, and possess. Other states have banned Kratom: Alabama, Arkansas, Indiana, Tennessee, Vermont, District of Columbia and Wisconsin. Individual cities have also had success in banning Kratom: San Diego, Sarasota, and Denver. However just as many states and jurisdictions have tried to ban the dietary supplement unsuccessfully. The U.S Food and Drug Administration has posed a public health advisory in which

claims “clear data on the increasing harm associated with Kratom”, the FDA has associated 36 deaths worldwide involving the drug.

### **How to treat a Kratom emergency**

Treatment recommendations are dependent upon the presentation of the patient. For the patient who has taken a large or potent enough dose to achieve the narcotic effect, the obvious priority is airway patency at the BLS or ALS level. Adequate respirations will also be mitigated, BVM ventilations if indicated and the administration of naloxone at the standing order dose for narcotic suspicion.

### **Contacting the Poison Control Center**

Contact the Poison Control Center for further recommendations. As with any substance abuse emergency, attempt to obtain the history of the amount taken. When contacting the PCC via cell phone you will most likely be routed to the Blue Ridge Poison Center (located in Charlottesville, VA). In Fauquier County, we fall into the National Capital Poison Center (located in Washington, DC) region. Of course, both offices can and have given us excellent guidance in the past. The only concern is for data collection, specifically on a new, potentially dangerous, substance for which not much is known. Whenever possible, if met with a Kratom emergency please contact the National Capital Poison Center (direct number 202-625-3333).

As providers we must be the subject matter experts on public health events, such as Kratom, a new non-FDA approved substance that is gaining popularity and has been encountered in our community.



### **References**

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Questions regarding this bulletin should be directed to Technician Mahlon Johnson, Technician Charles Hunter, Jr., or Lieutenant Matthew Shields.