

# Long-Term Buprenorphine Treatment for Kratom Use Disorder

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## What is Kratom?

Kratom (*Mitragyna speciosa*) is a herbal supplement available in multiple forms, including leaves, powder, extract, pills, and capsules.



Most importantly, Kratom is composed of:

- **Mitragynine:** a partial agonist at the mu-opioid receptors and an antagonist at the kappa-opioid receptors.
- **7-hydroxymitragynine:** acts as an opioid receptor agonist and antagonist at the mu and kappa opioid receptors, respectively.

## Background

Opioid overdose death rates have been increasing in the past few years, accounting for 47,600 American deaths in 2017.

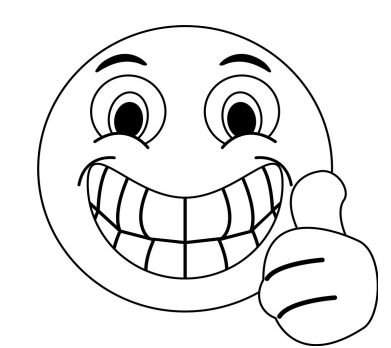
More recently, there has been an increased use of alternative substances, including Kratom, which can also produce central nervous system effects.

Opioid agonist therapy with buprenorphine, a partial mu-opioid receptor agonist, has been identified as an effective treatment modality for many illicit substances. However, current literature includes only a few, small (sample sizes 1-2 patients) case reports regarding treating Kratom use disorder with buprenorphine.

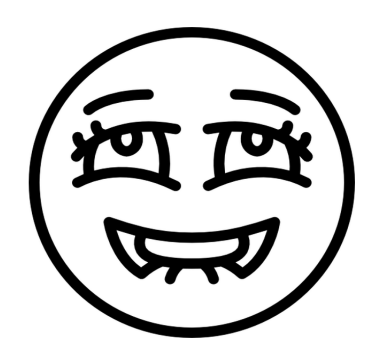
## The Problem

Increasing reports of Kratom use in the United States due to:

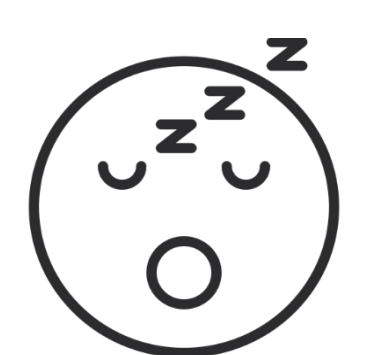
- Legal status
- Addictive potential
- Increasing popularity
- Comparable price
- Accessibility
- Use for pain and withdrawals



<5 grams  
Energized



5 - 15 grams  
Euphoric



>15 grams  
Sedated

Regular Kratom users become dependent, and/or experience cravings and withdrawals.

The purpose of this case series is to further explore the efficacy of buprenorphine treatment for individuals with Kratom use disorder, using a larger sample size.

## Methodology

Patients were included in this case series if they identified Kratom as their *primary* substance of use and were subsequently treated with buprenorphine/naloxone (Suboxone).

Target variables analyzed for each patient included:

- ✓ Length and dose of past Kratom use
- ✓ Duration of ongoing treatment/current treatment status
- ✓ Initial stabilizing buprenorphine dose
- ✓ Current daily buprenorphine dose (as of March 2020)
- ✓ Current outpatient appointment frequency (as of March 2020)
- ✓ Urine definitive drug test results (as of March 2020)

## Case Series Summary

	Length of Kratom use before treatment (months)	Past Kratom use (grams per day)	Duration of ongoing treatment (months)	Initial stabilizing BUPNx dose (mg of Suboxone per day)	Current Daily BUPNx dose (mg of Suboxone per day)	Current outpatient appointment frequency	Number of urine definitive drug test results positive for mitragynine
32yo F	18	20	13	8	6	Lost to follow up	1
30yo M	18	11	15	16	8	Every 3 wks	2
31yo M	3	3-10	5.5	4	N/A	Lost to follow up	7
39yo M	3	8-12	7	8	N/A	Lost to follow up	9
24yo M	84	40-60	14	18	18	Every 3 wks	11
53yo F	300	113.4	12	8	14	Every 2 wks	1
26yo F	24	50-100	7	12	8	Bi-weekly	10
29yo M	6	12.2	4.5	16	N/A	Lost to follow up	8
29yo M	48	0.06-0.08	8	16	14	Every 2 wks	0*
37yo M	288	60	7	16	N/A	Lost to follow up	11
38yo M	144	50-60	7	16	20	Weekly	33
35yo F	18	42.8	13	10	14	Every 2 wks	16
46yo M	1	60	10	16	16	Every 2 wks	4
35yo F	228	128.6-142.9	22	8	16	Every 2 wks	9
36yo F	6	7.2-24	19	4	12	Bi-weekly	3
39yo M	54	42.9-71.4	21	8	16	Every 2 wks	2
32yo F	36	85.7-114.3	15.5	16	N/A	Lost to follow up	5
39yo M	60	28.6-57.1	14	12	12	Every 2 wks	30
30yo M	36	84-280	21.5	12	12	Every 2 wks	4
48 yo F	18	40-60	11.5	12	16	Every 2 wks	4
26yo M	36	100-200	8	6	N/A	Lost to follow up	5
38yo F	60	Unknown	9	2	4	Monthly	6
32yo M	24	40	8	2.9-0.71**	16	Bi-weekly	21
46yo M	36	21.6-27	9	2	8	Every 2 wks	5
46yo M	36	857.1	7	20	N/A	Lost to follow up	32
27yo F	4	4	5.5	10	16	Weekly	1
34yo M	24	18-60	5	8	20	Weekly	8
29yo F	24	22.5-75	5	20	3	Every 2 wks	4

\*Patient was already using Suboxone to stay off Kratom when he came to Ideal Option.

\*\*Patient was prescribed Zubsolv instead of Suboxone, which has a bioavailability of 1.4 times the bioavailability of Suboxone.

## Results

- 28 patients were identified with Kratom as their primary substance of abuse:
  - 11 females
  - 17 males
  - Age range: 24 to 53 years
    - Average age: 36 years
- On average, patients used 92 grams of Kratom per day before seeking treatment
  - History of Kratom use ranged anywhere from 1 month to 25 years
- 20/28 patients are still receiving maintenance treatment
- Patients have been in ongoing treatment anywhere from 4.5 months to 22 months
  - Majority of the patients are seen every 2 weeks



## Conclusion

- ✓ Largest case series exploring buprenorphine treatment for Kratom use disorder.
- ✓ Findings suggest that buprenorphine can be an effective treatment option.
  - ~71% retention rate for treatment times varying from 4.5 months to 22 months.
- ✓ This is especially important since Kratom is being used in place of traditional opioids.
  - The findings can help inform medical providers of treatment options amidst the opioid epidemic.

## References

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