

# Ibogaine

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## Background

Ibogaine is a naturally occurring substance with hallucinogenic properties. It is an indole alkaloid found in the root bark of the Iboga shrub native to West Africa. Ibogaine is often used in religious and spiritual ceremonies to gain enlightenment by members of the Bwiti culture in Cameroon and Gabon<sup>1</sup>. The literature first shows the method for extraction of ibogaine alkaloid in 1901, when it was used in animal experiments to determine its effects on different systems of the body<sup>2</sup>. Since the 1960s, ibogaine has been used to reduce cravings for psychoactive substances. **Studies dating back to the 1990s demonstrated the effectiveness of using ibogaine to reduce withdrawal symptoms and increase prolonged periods of sobriety among patients**<sup>3</sup>. In recent years, research efforts have been focusing on the efficacy of using ibogaine to treat opioid use disorder (OUD) specifically.

One limitation of the research surrounding ibogaine is that its use often occurs in non-clinic settings due to laws and restrictions in different countries<sup>4</sup>. **In 1967, the United States Drug Enforcement Agency (DEA) classified ibogaine as a schedule-I-controlled substance, making it illegal to use for any purpose.** Similar restrictions on ibogaine exist in 9 out of 28 countries in the European Union. **Both Mexico and Canada, however, legalized ibogaine and have ibogaine treatment clinics for individuals with substance use disorder**<sup>4</sup>.

## Mechanism

Ibogaine is a tryptamine, or a substance that has hallucinogenic properties. Ibogaine metabolite noribogaine acts on various neurotransmitters<sup>2</sup>. Ibogaine acts as a serotonin reuptake inhibitor, kappa-opioid receptor agonist, and partial mu-opioid receptor agonist<sup>2</sup>. Its' effects on the kappa-opioid receptor are believed to be the cause for its psychedelic effects<sup>1</sup>. **Ibogaine's mechanism can also work to reverse addictive pathways and loops in the brain, reverting it back to its pre-addiction condition<sup>2</sup>.**

## Effects

When taken at a therapeutic dose, ibogaine's active window is 24 to 48 hours<sup>2</sup>. Therapeutic levels can range from 5mg to 20mg<sup>2</sup>. The first phase, known as the "visual phase" typically lasting 4-6 hours, occurs after ibogaine consumption and produces a dream-like psychedelic state<sup>2</sup>. The phase following this, known as the "introspective phase", usually occurs over a day after consumption and can last up to days or weeks<sup>2</sup>. Iboga can be consumed orally by ingesting a powdered form of the dried-up Iboga root bark or using the powder to make a tea<sup>2</sup>. **More recently, Iboga plants and seeds have also been available for purchase from online sites<sup>2</sup>.** Another method of consumption is to chew the root bark of the Iboga plant<sup>3</sup>. When using for treatment purposes, the iboga root bark is refined by using hydrochloric acid to make ibogaine<sup>3</sup>. **According to researchers, this form allows for more precise therapeutic dosing and fewer side effects<sup>3</sup>.**

## Treatment

Over the years, several observational studies and retrospective case studies have examined the effectiveness of ibogaine in mitigating opioid withdrawal<sup>2</sup>. One study examined its use for treating OUD in comparison to buprenorphine<sup>4</sup>. Several case studies describe using single oral doses of ibogaine to treat OUD in patients<sup>2</sup>. **Researchers argue that ibogaine treatment may be more cost-effective** due to it being administered in a

single treatment session compared to prolonged daily treatment schedules seen with some forms of MOUD<sup>5</sup>. Another argument favoring ibogaine as an alternative to buprenorphine is that the risk of misuse and diversion with ibogaine is significantly lower<sup>5</sup>.

Research also shows **ibogaine to be effective in decreasing cravings in individuals with OUD as well as decreasing depressive symptoms related to opioid use**<sup>5</sup>. A typical dose of Ibogaine given to individuals to treat substance dependence ranges from 500 to 1000 mg<sup>2</sup>. An observational study was conducted exploring the safety of Ibogaine use for individuals with opioid use disorder<sup>1</sup>. The results from the study showed that ibogaine can induce a clinically relevant, but reversible, QTc prolongation, bradycardia, and severe ataxia in patients with OUD<sup>1</sup>. According to other studies detailing the use of ibogaine to treat traumatic brain injuries in veterans, supplementing with magnesium can protect against the negative cardiovascular effects caused by ibogaine<sup>6</sup>.

Although there have been studies showing potential benefits of ibogaine therapy, its classification as a schedule I substance prohibits its use for any medical purpose. For treatment of OUD, FDA-approved medications such as buprenorphine, methadone, and naltrexone are considered best practice.

## Resources

To learn more about opioids and other drugs and MOUD, you can visit our website at <https://mattersnetwork.org/education>.

## References

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