Ibogaine: A Clinical Summary

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Introduction

This document is a brief summary of current medical practice related to the use of ibogaine for the clinical treatment of behavioral conditions, along with a summary of some of the academic findings related to ibogaine's efficacy and effects.

***If you're considering ibogaine treatment,** or you're evaluating it on behalf of someone you know, this information may help you understand how ibogaine has been used medically; what ibogaine treatment is likely to achieve for specific conditions; and what its effects, side effects, and risks are. It may also help you consider whether ibogaine treatment is a better fit for you than other available treatments for substance abuse or another behavioral condition.*

***For clinicians and others interested in further research,** it will also provide an orientation to the academic literature. This group includes professionals in the fields of addiction medicine and counseling, psychiatric care, and psychotherapy. Our goal is to help you understand the current state of knowledge about the medically-supervised administration of ibogaine for addiction and other specific behavioral diagnoses, including what is known about efficacy and risk mitigation.*

About the Author

This document was prepared by Tom Kingsley Brown, Ph.D.

Dr. Thomas Kingsley Brown is a prominent researcher into the effects of altered states of consciousness on behavioral health conditions, and has been investigating ibogaine treatment since 2009. He has studied the impact of ibogaine on quality of life when used for the treatment of behavioral conditions, and conducted an observational study of the long-term outcomes of ibogaine-assisted treatment for substance dependence. He has a B.S. in chemistry from the University of Pittsburgh, an M.S. from the California Institute of Technology, and a Ph.D. in anthropology from UC San Diego, where he administers a research program for students interested in pursuing doctoral degrees.

About Beond (Beond Treatment S. de RL de C.V.)

Beond Mexico (beond.us) is a residential treatment program in Mexico for people who experience challenges with substance abuse, post-traumatic stress disorder, and other similar behavioral conditions. Conditions like these are the result of both physiological (chemical) and psychological (behavioral) factors, and Beond's

treatments address both, to help people uncover the source of suffering, and put the patient on a path to long-term physical health and spiritual wellness.

Often, a Beond Mexico treatment plan will include the administration of ibogaine, a plant-derived psychoactive pharmaceutical substance that has long been used by indigenous peoples to induce a psychedelic experience. It has been medically established that such a brief and controlled psychedelic experience can disrupt the mental and physical patterns that underpin addiction and other harmful behaviors, leading to permanent life changes and an improved quality of life.

Background

Important note:

- *Throughout this paper, in discussing the use of ibogaine, we are explicitly referring to* ***the administration of ibogaine by clinicians in a medical setting****, for the purpose of treating a medically documented health condition according to established guidelines.*
- *Like any drug or medicine, ibogaine has potentially serious side effects, most of which can be entirely avoided or mitigated through proper clinical administration.*
- *Although some individuals who take ibogaine informally or outside a medical environment also report psychological and/or spiritual benefits, doing so also entails more significant risks, has not been documented to be successful in treating health conditions, and is outside the scope of this paper.*

Ibogaine is a medication derived from a West African shrub. Ingesting a large enough dose induces a temporary psychedelic experience that can last several hours, normally with no significant side effects. For hundreds of years, indigenous African peoples, such as those practicing the Bwiti tradition, have ingested large doses of Ibogaine in its raw root bark form for its spiritual and healing properties.

Over the past thirty years, Ibogaine has been administered in various clinics around the world for medical treatment purposes, most often to treat drug dependence. This is because (as described more fully in this paper):

- **Ibogaine reduces drug withdrawal symptoms.** Ibogaine has been shown to significantly ameliorate the short-term withdrawal symptoms associated with treating opioid dependence, as well as the longer-term cluster of symptoms known as post-acute opioid withdrawal syndrome (PAWS).
- **Ibogaine helps break addiction.** It has been shown to be of value as an addiction interrupter across a broad spectrum of chemical and behavioral dependencies, such as opioid addiction, cocaine addiction, alcoholism, and stimulant abuse. And there is evidence not just that people treated with ibogaine stop using the

substance they are addicted to, or significantly reduce their usage -- but that this positive outcome persists over time.
- **Ibogaine can benefit people with other physiological and psychiatric conditions.** It has been shown to benefit certain clients with traumatic brain injury, major depression, and post-traumatic stress disorder.
- **When administered in a medical setting according to clinical guidelines, ibogaine is safe.** The typical side effects of ibogaine are mild, and disappear when treatment is concluded. There are no recorded cases of death or serious irreversible side effects resulting from clinical treatment with ibogaine under medical supervision; and the possible serious side effects, which are rare, are scientifically understood and can be managed and reversed.
- **Ibogaine itself is not addictive.** Preclinical studies validate the extensive clinical experience of patients: people who use ibogaine do not become dependent on ibogaine, so it can be used for one-time or short-term treatment without complicating the patient's substance dependence profile.

Because it causes temporary psychedelic effects that can last for several hours, ibogaine is a scheduled drug in many countries, including in the United States, where it is not approved either for medical or for personal use. But it has been used safely and effectively for thirty years, and there is a growing body of evidence -- including academic studies and reports, some of which will be cited here -- that ibogaine is both effective and safe when it is prescribed by a clinician and administered in a medical setting. In some countries, such as New Zealand, ibogaine is now legal for physicians to prescribe and use.

For drug treatment in particular, ibogaine has been used so widely that a consortium of experienced physicians, clinicians, and researchers known as the Global Ibogaine Therapy Alliance have developed a comprehensive set of clinical guidelines for its safe and effective use.

In some of its treatment programs, Beond Mexico *prescribes and administers ibogaine to patients, in clinical settings under medical supervision, consistent with the Ibogaine Alliance guidelines.* Beond Mexico *only uses ibogaine therapy in countries where it is legal.*

Indications and Effects

Ibogaine is used to treat addiction to opioids and opiates, alcohol, stimulants, and prescription medications, as well as severe mood disorders, chronic destructive behaviors, and post-traumatic stress disorder (PTSD).

- For **opioid use disorder,** the substance use condition for which ibogaine is most commonly administered, a range of formal studies have been published that together establish the nature and duration of the positive clinical effects of ibogaine.

- For **cocaine use disorder**, preclinical research shows that ibogaine reduces drug self-administration. A clinical study found that ibogaine eliminates cravings for cocaine. Also, evidence from a retrospective study demonstrates that ibogaine administered to individuals after detox from cocaine significantly extends the duration of abstinence from cocaine.
- For **alcohol use disorder,** for which ibogaine is also widely administered, there is evidence from preclinical studies suggesting that ibogaine reduces both cravings and the likelihood of relapse.

In all three cases, the formal findings of studies are broadly validated by the professional opinions of clinicians and the medical histories of patients.

For **other substance use disorders,** the efficacy of ibogaine has not been formally established, but both clinicians and patients report success in treating other substance dependencies with ibogaine. Similarly, as noted below, there are **other behavioral disorders** beyond substance abuse that have not been formally studied but that clinicians and patients report success in treating with ibogaine.

In both these categories, clinicians describe a pattern of effects, side effects, and risks similar to that documented in studies of opioid use disorder treatment. In other words, based on the early evidence it is very likely that ibogaine can be used to treat a wide variety of behavioral conditions beyond opioid use disorder, with a comparable degree of success.

Psychological Mechanism of Action

Virtually all behavioral treatment protocols for substance abuse aim to disrupt routine patterns of behavior to make way for change. In a conventional drug rehabilitation setting, this disruption is achieved over time by low-impact and non-invasive means, such as isolation in a calm (and substance-free) environment and participation in talk therapy, which aim to induce a sense of reflection and to generate insights that can be the foundation for change.

The administration of ibogaine also leads to disruptive effects, but unlike other treatments, its effects are abrupt and substantial. The ibogaine flood dose typically triggers a disruption in habitual behaviors and thought patterns, leads soon after to a coalescence of insight into the motivations and effects of those habitual behaviors, and concurrently brings about a short-term suppression of cravings.

Taken collectively, these effects, and the psychological “reset” that they trigger, are believed to be the fundamental mechanism by which ibogaine supports the treatment of behavioral conditions.

Treatment of Substance Abuse

General Effects

In substance abuse treatment, ibogaine acts to reduce cravings, ameliorate withdrawal symptoms both immediately and over time, and contribute to long-term cessation or reduced use; each of these effects has been formally documented through studies. These effects have been shown to continue over time, with patient studies showing persistent positive effects even after 12 months —which is significant, given that full cessation or long-term reduction of use is difficult for many persons with substance use disorders to achieve. Patients treated with ibogaine for substance abuse also report a reduction in depressive symptoms over the ensuing months.

It has also been established through studies that administration of ibogaine does not induce cravings for ibogaine itself (i.e., in common parlance, that ibogaine itself is not addictive).

It is noted that ibogaine's effect in reducing withdrawal symptoms is profound (and in the case of opioids, has been documented in the literature). This differentiates it from psychedelics such as psilocybin and LSD, which have also been successfully used to treat addiction but which do not provide the same palliative benefits. By reducing discomfort and distraction, the mitigation of withdrawal symptoms that ibogaine provides can help the patient better take advantage of the opportunity offered by the psychological disruption it also causes.

As with all substance abuse treatment protocols, the long-term effectiveness of ibogaine therapy is likely to be improved through secondary interventions such as ongoing talk therapy, increased social and family support, habits of self-care and spiritual practice, and pragmatic (e.g., economic) support where applicable.

Opioid and Opiate Addiction

Ibogaine is widely administered for the treatment of opioid use disorder. In formal clinical studies, treating opioid use disorder with ibogaine has been shown to reduce cravings, significantly mitigate withdrawal symptoms, and support cessation or long-term reduced use.

Separate from its value as a treatment for addiction, ibogaine has been shown to potentiate opioid analgesia (to intensify the pain-relieving effects of opioids). This effect has been known since the 1950s; it is now being pharmaceutically commercialized, as a way of enabling patients who take opioids under medical supervision to achieve pain relief at a lower dosage.

Other Substance Use Disorders

The nature of ibogaine's psychological disruption suggests that it can be similarly efficacious against addiction to other substances, and it is in fact clinically administered to treat addiction to other substances, e.g., cocaine (for which there is clinical evidence of efficacy) and nicotine (for which there is preclinical evidence).

Treatment of Other Behavioral Conditions

Because the temporary disruption of habitual thoughts and behaviors is believed to be a significant driver of ibogaine's clinical effects, ibogaine is likely to be effective not only against other addictive conditions (e.g., gambling addiction) but also against other conditions and states that are driven by habitual or compulsive behavior (e.g., eating disorders), in which patients might benefit from a like disruptive experience.

Certainly the clinicians who most frequently administer ibogaine in a medical setting, and many of their patients, would concur. And ibogaine has in fact been used successfully, by clinicians experienced in its administration, to treat conditions such as traumatic brain injury, major depressive disorder, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder, and bipolar disorder. There is evidence of efficacy for some of these uses (specifically, for treatment of PTSD, and for alleviation of depressive symptoms in people under treatment for opioid dependency), and research is underway or soon will be in regard to others.

Evidence of ibogaine's likely wider efficacy also comes through better understanding of its mechanism of action. As one example, as ibogaine affects serotonin uptake, it has been plausibly hypothesized that ibogaine administration could be efficacious against other conditions that are mediated by serotonin, and as noted immediately above it has been successfully used to treat some such conditions.

Clinical Ibogaine Treatment: Selected References

- **Treatment of opioid use disorder:** In multiple studies, ibogaine has been associated with substantive effects on opioid withdrawal symptoms and drug use in patients for whom other treatments have been unsuccessful. Cessation or reduced use is sustained over time. Ibogaine's positive effects were validated by multiple clinical assessment and scoring protocols that are in common professional use to assess the subjective experience of people with addiction and their outcomes under treatment.
    - *Background:* Brown, T.K., "Ibogaine in the treatment of substance dependence" (2013), *Curr Drug Abuse Rev*
    - Brown, T.K. and Alper, K., "Treatment of opioid use disorder with ibogaine: detoxification and drug use outcomes" (2018), *Am J Drug Alcohol Abuse*

    - Malcolm, B,J., Polanco, M., and Barsuglia, J.P., "Changes in Withdrawal and Craving Scores in Participants Undergoing Opioid Detoxification Utilizing Ibogaine" (2018), *J Psychoactive Drugs*
    - Noller, G., Frampton, C.M, and Yazar-Klosinski, B., "Ibogaine treatment outcomes for opioid dependence from a twelve-month follow-up observational study" (2017), *Am J Drug Alcohol Abuse*
    - Davis, A.K., Barsuglia, J.P., Windham-Herman, A.-M., *et al.,* "Subjective effectiveness of ibogaine treatment for problematic opioid consumption: Short- and long-term outcomes and current psychological functioning" (2017), *J Psychedelic Stud*
- **Treatment of heroin addiction:** A study determined that ibogaine is effective in blocking opiate withdrawal symptoms.
    - Mash, D.C., Kovera, C.A., Pablo, J. *et al.,* "Ibogaine in the treatment of heroin withdrawal" (2001), *The Alkaloids Chemistry and Biology*
    - Brown, T.K. and Alper, K., "Treatment of opioid use disorder with ibogaine: detoxification and drug use outcomes" (2018), *Am J Drug Alcohol Abuse*
    - Noller, G., Frampton, C.M, and Yazar-Klosinski, B., "Ibogaine treatment outcomes for opioid dependence from a twelve-month follow-up observational study" (2017), *Am J Drug Alcohol Abuse*
- **Treatment of alcohol addiction:** In preclinical studies, ibogaine has been shown to decrease cravings and/or relapse, and insight was gained into its mechanism of action.
    - He, D.-Y., McGough, N.N.H., Ravindranathan, A., *et al.,* "Glial Cell Line-Derived Neurotrophic Factor Mediates the Desirable Actions of the Anti-Addiction Drug Ibogaine against Alcohol Consumption" (2005), *J Neurosci*
    - Henriques, J.M., Anjos-Santos, Alexia, Rodrigues, I.R.S., *et al,* "Ibogaine Blocks Cue- and Drug-Induced Reinstatement of Conditioned Place Preference to Ethanol in Male Mice" (2021), *Front. Pharmacol.*
- **Treatment of cocaine addiction:** Ibogaine has been shown to reduce cravings in cocaine-dependent patients.
    - Mash, D.C., Duque, L., Page, B., *et al.,* "Ibogaine Detoxification Transitions Opioid and Cocaine Abusers Between Dependence and Abstinence: Clinical Observations and Treatment Outcomes" (2018), *Front. Pharmacol.*
    - Cappendijk, T.S.L., Dzoljic, M.R. "Inhibitory effects of ibogaine on cocaine self-administration in rats" (1993), *Eur J Pharmacol.*
    - Schenberg, E., de Castro Comis, M.A., Rasmussen Chaves, B. *et al,* "Treating drug dependence with the aid of ibogaine: a retrospective study" (2015), *J. Psychopharmacol.*
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    - https://www.researchgate.net/publication/266380963_Treating_drug_dependence_with_the_aid_of_ibogaine_A_retrospective_study

- **Treatment of nicotine addiction:** In a preclinical study, rats consumed less nicotine after ibogaine was administered.
    - Chang, Q., Hanania, T., Mash, D.C., *et al.,* "Noribogaine reduces nicotine self-administration in rats" (2015), *J Psychopharmacol.*
- **Treatment of post-traumatic stress disorder (PTSD):** In a survey, patients reported a significant reduction in symptoms of PTSD and depression after ibogaine treatment.
    - Davis, A.K., Averill, L.A., Sepeda, N.D., *et al.,* "Psychedelic Treatment for Trauma-Related Psychological and Cognitive Impairment Among US Special Operations Forces Veterans" (2020), *Chronic Stress (Thousand Oaks)*
- **Treatment of depression:** Three studies have shown that depression severity, as measured by the Beck Depression Inventory II, was significantly lower after treatment with ibogaine for Opioid Use Disorder.
    - Mash, D.C., Kovera, C.A., Pablo, J. *et al.*, "Ibogaine: complex pharmacokinetics, concerns for safety, and preliminary efficacy measures" (2000), *Ann NY Acad Sci*
    - Noller, G., Frampton, C.M, and Yazar-Klosinski, B., "Ibogaine treatment outcomes for opioid dependence from a twelve-month follow-up observational study" (2017), *Am J Drug Alcohol Abuse*
    - Brown, T.K., Noller, G.E., and Denenberg, J.O., "Ibogaine and Subjective Experience: Transformative States and Psychopharmacotherapy in the Treatment of Opioid Use Disorder" (2019), *J Psychoactive Drugs*

Source and Method of Administration

Ibogaine is a medication derived from the root bark of the West African shrub known as iboga (Tabernanthe iboga). It is typically taken orally, either by ingestion (swallowing) or as a sublingual tincture (liquid placed under the tongue).

In informal settings, especially when taken for its psychotropic effects only, ibogaine is often taken in the form of root bark powder or as a liquid extract (colloquially known as total alkaloid, or TA, extract). These preparations, however, are not always manufactured to the precision or purity standards suitable for medical administration.

Established protocols strongly advise that ibogaine be medically administered in the form of ibogaine hydrochloride, a purified form of the shrub's raw root bark extract with some alkaloids removed, rendered as a pill or a powder in a consistent concentration to enable dosed medical administration. This is the form of ibogaine administered at Beond Mexico

For treatment of drug dependency and other behavioral disorders, ibogaine is typically administered as a single concentrated "flood dose," causing the body to metabolize a large quantity of ibogaine at once. Administering it in this way contributes to its psycho disruptive effects, which are in turn thought to be a significant component of its efficacy against behavioral disorders. In some cases, supplemental doses over a period of days following the flood dose may be indicated.

The clinical effects of ibogaine administration are discussed above; the patient's experience, including the psychotropic effects, are discussed below.

Reported Experiential Effects of Ibogaine

The state of altered consciousness that is typically induced by the ibogaine flood dose — an oneiric, visual, spiritual, and mystical experience — begins within one to two hours of ingestion and lasts for several hours. Many clients relate that this psychotropic experience has lasting psychological and spiritual impact, helping them gain insight into their past and the root causes of their behavior and mindset, and put that insight to use to effect life changes.

There are usually two phases to the experience. The first phase is a **visionary phase,** involving dreamlike psychedelic effects, and typically lasts for 4 to 6 hours. The physiological side effects of ingestion (described below), which most often are not serious in any case, subside once this phase is over. As described more fully below, it is advisable for the patient to be kept comfortable and medically monitored by trained professionals in a clinical environment until the visionary phase concludes.

The visionary phase is followed by an **introspective phase,** which is primarily responsible for the psychotherapeutic effects. At this point, although their senses may be heightened and they may be distracted, the patient is no longer in the grip of an active psychedelic or "waking dream" experience.

This intensive introspection period, which can last a full day or more, can make it possible for the patient to examine their own fears and behavioral motivations with more clarity and candor than they typically do, and to process memories and lived experience — including traumatic experience — more honestly than usual, as a means to understanding the path to change and resolving to set out on that path.

Following the introspective phase, the direct experience triggered by the ibogaine flood dose is "over." But the resulting psychological impact, and the impact of the concurrent physiological disruption of habitual behaviors brought on abruptly by the flood dose, often persist long after treatment, helping patients modify their behavior and take steps toward long-term physical healing and spiritual health.

The Role of Spirituality in Healing

It has long been established — for so long that it is effectively a truism — that healing of all kinds is often enhanced by spirituality and spiritual practice. And in particular, the healing of psychological trauma can be more rapid and more complete when it is supported by a spiritual component.

In regard to addiction in particular, most conventional therapeutic protocols — including both the twelve-step approach to healing, and the talk therapy that is common in conventional drug rehabilitation environments — rest in part on spiritual foundations. And the powerful spiritual experiences people often have during treatment with ibogaine, which often approach or achieve the level of a mystical experience, can facilitate profound transformations in the personal sense of purpose, self-forgiveness, and potential for change. As the famous psychoanalyst Carl Jung suggested many decades ago, an intense religious or mystical experience has the power to enable a person to change the course of their life away from the path of addiction.

The experiences and disruptions induced by the administration of ibogaine can help clear away distractions (including the physiological distraction of withdrawal symptoms), and open the mind to a spiritually informed approach to life and its challenges. Entirely aside from the introspective impact of ibogaine, the spiritual awareness that can arise as a result of the patient's encounter with ibogaine, even if it is only present in the background and the patient never or rarely engages with it directly, can be its own positive contributor to long-term change.

Experiential Effects: Selected References

- **On the subjective experience of ibogaine treatment:**
    - Brown, T.K., Noller, G.E., and Denenberg, J.O., "Ibogaine and Subjective Experience: Transformative States and Psychopharmacotherapy in the Treatment of Opioid Use Disorder" (2019), *J Psychoactive Drugs*
    - Davis, A. K., E. Renn, A. Windham-Herman, M. Polanco, and J. P. Barsuglia. 2018. A mixed-method analysis of persisting effects associated with positive outcomes following ibogaine detoxification". Journal of Psychoactive Drugs 50 (4):287–97. doi:10.1080/02791072.2018.1487607. [Taylor & Francis Online], [Web of Science ®],
    - Rodger, J. 2018. Understanding the healing potential of ibogaine through a comparative and interpretive phenomenology of the visionary experience. *Anthropology of Consciousness* 29 (1):77–119. doi:10.1111/anoc.12088. [Crossref], [Web of Science ®], [Google Scholar]

- Schenberg, E. E., M. A. de Castro Comis, J. F. M. Alexandre, B. D. R. Chaves, L. F. Tófoli, and D. X. Da Silveira. 2016. Treating drug dependence with the aid of ibogaine: A qualitative study. *Journal of Psychedelic Studies* 1 (1):10–19. doi:10.1556/2054.01.2016.002. [Crossref], [Google Scholar]

Safety and Side Effects

Since Ibogaine is widely used for the treatment of behavioral conditions such as substance abuse, formal clinical guidelines for the safe administration of ibogaine were developed by a group of physicians and nurses in 2015, based on their own experience and the consensus experience of their peers.

History of Safe Administration

When administered according to these guidelines by medical professionals in a clinical setting, ibogaine is safe. It has been administered safely around the world over the past 30 years to tens of thousands of patients, many of whom were in the throes of acute substance abuse and dependence.

For cultural reasons, in many countries, psychoactive substances are scheduled drugs, making their possession and use illegal despite their therapeutic value. In the case of ibogaine, its long record of safe administration and the increasing scientific evidence of its clinical benefit are leading to its descheduling, most significantly to its classification as an experimental prescription drug in New Zealand in 2010.

Like any pharmacological substance, when administered improperly or in unsafe conditions, Ibogaine can have undesired and potentially serious side effects, including death. But a 2012 research study identified a total of 19 individuals outside of West Central Africa over 28 years who died within 72 hours of administering Ibogaine. At the time of the study, this was a complete set of all individuals who were known to have died during this period under these conditions.

The study found no evidence that ibogaine itself was inherently toxic; rather, the data suggested that most of the deaths were directly tied to the patients' advanced pre-existing medical conditions, to using impure product or administering it unsafely, or to the ingestion of opioids during ibogaine treatment.

Contraindications and Interactions

The two most common pre-existing medical conditions that exacerbate the risks of ibogaine treatment are certain cardiovascular conditions (discussed more fully below), and coincident withdrawal from alcohol or benzodiazepines.

The risk of cardiovascular complications can be reduced by ensuring that cardiovascular history is disclosed before treatment, and that the active treatment day involves cardiovascular monitoring and clinical observation. Patients with codependency conditions can taper their alcohol or benzodiazepine use under medical supervision before treatment begins.

Additionally, substances or foods that are broken down by the CYP 450 2D6 enzymes (including grapefruit and quinine) should be avoided before treatment, as they can amplify the physiological effects of ibogaine and make the cardiac risks of treatment more significant.

Serious Risks and Risk Mitigation

The cardiac abnormalities that ibogaine has been known to induce in rare cases include QTc prolongation (an arrhythmia), bradycardia (slowed heartbeat), and hypotension (lowered blood pressure). Aside from ensuring the comfort of the patient in a potentially disorienting situation, the possibility of these complications is the most important reason why ibogaine should only be administered in a clinical setting with live medical monitoring.

With appropriate screening and live cardiac monitoring, coupled with emergency medical support, these cardiac complications can be identified if they occur and addressed in real time. These cardiac complications are reversible and the risk does not persist beyond the duration of the ibogaine treatment itself; and there are medical guidelines and protocols for appropriate intervention, should they arise.

Routine Side Effects

In addition to the rare serious side effects, other more common side effects during ibogaine treatment are nausea and vomiting, ataxia (physical imbalance), and anxiety and disorientation, especially during the first phase of the psychedelic experience brought on by the ingestion of ibogaine. These effects are not unique to ibogaine; they are also often experienced by people consuming other psychedelic substances.

These side effects are not life-threatening, and are temporary (they subside as the ingested ibogaine is metabolized); but they can be uncomfortable, which is one reason why treatment protocols recommend that patients be accompanied and monitored during treatment.

In the hours or days after treatment, concurrent with and following the period of introspection, patients may experience a sense of psychological elevation and a decreased need for sleep. These effects, too, are temporary.

Safety and Side Effects: Selected References

- **On the safety of ibogaine:** Luz, M. and Mash, D.C., "Evaluating the toxicity and therapeutic potential of ibogaine in the treatment of chronic opioid abuse" (2021), *Expert Opin. Drug Metab. Toxicol.*
- **Review of fatalities following ibogaine ingestion:** Alper, K.R., Stajic, M., and Gill, J.R., "Fatalities Temporally Associated with the Ingestion of Ibogaine" (2012), *J Forensic Sci.*
- **Cardiac side effects, and their reversibility:** Knuijver, T., Schellekens, A., Belgers, M., *et al.*, "Safety of ibogaine administration in detoxification of opioid-dependent individuals: a descriptive open-label observational study" (2022), *Addiction*

Pharmacology

Serotonin system: The serotonin transporter (SERT) is the site of action of the most common class of antidepressants known as SSRIs (selective serotonin reuptake inhibitors), which include Lexapro, Zoloft, and Prozac. Like SSRIs, ibogaine and its metabolite noribogaine are very strong serotonin reuptake inhibitors (i.e., they raise the level of serotonin). They also act to inhibit the **NMDA receptor**, which is implicated in depression. Ketamine, which has a similar action, is now being used to treat major depressive disorder.

Serotonin 2A: Ibogaine also facilitates introspection in the context of a psychedelic experience through activation of the serotonin 2A receptor (the main site of action for psilocybin and LSD).

Kappa opioid receptor: A new drug target for the treatment of mood disorders is the kappa opioid receptor. Blocking this receptor has antidepressant and anxiolytic effects. Ibogaine partially blocks this receptor in a manner believed to be central to its therapeutic effects.

GNDF stimulation: Ibogaine stimulates the production of glial-derived neurotrophic factor (GDNF). GDNF can restore damaged dopamine neurons. Many conditions can dysregulate or damage dopamine neurons, including chronic pain, Parkinson's disease, severe drug addiction, and traumatic brain injury (TBI).

Pharmacology: Selected References

- **Basic pharmacology:** Corkery, J.M., in *Progress in Brain Research* (2018), excerpted here; Obembe, S.B. (2012), in *Practical Skills and Clinical Management of Alcoholism & Drug Addiction*, excerpted here
- **Comparative pharmacology among psychedelic treatments for substance abuse:** Winkelman, M., "Psychedelics as medicines for substance abuse

rehabilitation: evaluating treatments with LSD, Peyote, Ibogaine and Ayahuasca" (2014), *Curr Drug Abuse Rev.*
- **Serotonin systemic impact:** Coleman, J.A., Yang, D., Zhao, Z., *et al.*, "Serotonin transporter–ibogaine complexes illuminate mechanisms of inhibition and transport" (2019), *Nature*
- **Additional references** excerpted here (ibogaine) and here (noribogaine)

For more information
regarding Beond MX

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