

Ibogaine—be informed before you promote or prescribe

Many primary health care providers working with addiction patients ask, 'what is ibogaine and is it safe'? Recent interest in this compound, largely generated by websites (e.g. <http://ibogaine.org.nz/>) and the media (e.g. *Law and Order: SVU* Season 11 Episode 7), has highlighted its apparent efficacy in the treatment of opioid dependence. Consequently some patients are requesting it as part of their treatment regimen.

Ibogaine is the major active alkaloid extracted from the root bark of the Central West African rain forest shrub *Tabernanthe iboga*,^{1,2} traditionally used by indigenous people for medicinal purposes.² It appears to have dose-dependent effects, with low doses acting as a stimulant,³ and high doses as a hallucinogen. In the early 1960s the Western world began to use it for its putative 'anti-addictive properties'.^{3,4} Anecdotal human reports and case studies indicate that ibogaine decreases the severity of opioid withdrawal and reduces craving for heroin and cocaine for extended periods of time.^{3,4}

Ibogaine's pharmacology is complex, with much still unknown about its mode of action. It is rapidly metabolised in the liver to the active metabolite, noribogaine.^{1,3,5} Both drugs have been shown to mediate their effects on multiple neurotransmitter systems in the central nervous system (CNS), including N-methyl-D-aspartate (NMDA) receptor coupled ion channels, opioid, muscarinic, serotonin and nicotinic acetylcholine receptors and monoamine uptake sites.^{1,3,5,6} It is thought that their anti-addictive effects are mediated via the effect on dopamine signalling pathways.¹ Furthermore, there are reports that it alters the user's state of consciousness, causing an initial 'dream state' soon after ingestion (within one to three hours) which lasts for four to eight hours, progressing to an evaluative and personal reflec-

tive stage for the following eight to 20 hours, and ending in a residual stimulation stage (starting after 12–24 hours) that may last up to 72 hours following ingestion.^{1,5,7}

Despite the anecdotal evidence of its subjective effects, evidence of its efficacy in humans is restricted to open case studies.^{1,5,7} A case series conducted in the United States (US) and the Netherlands with heroin-dependent patients in withdrawal showed that 76% had no withdrawal symptoms at 24 and 48 hours post-treatment and no opioid use or drug seeking was reported for at least 72 hours.^{1,4} As yet no randomised controlled clinical trials in humans have been published. There are no long-term effectiveness studies of ibogaine treatment published, but anecdotal reports of long-term abstinence following treatment have been noted.^{1,2}

A number of adverse effects have been reported after use of ibogaine in humans. The main concerns are neurotoxicity (body tremors, postural stability, cerebellar damage and ataxia), cardiac effects (reduced heart rate and blood pressure, and QT-interval prolongation), cardiotoxicity, death, nausea and vomiting.^{1,2,4,5,7} Hence, insufficient long-term safety data are available to inform prescribing.

We were unable to find any official New Zealand (NZ) or international data with regards to ibogaine's prevalence of use, availability, cost and treatment utility. In most countries, including the US and many European countries, ibogaine is an unlicensed medicine and is illegal to possess, sell or distribute.^{1,4,8} Indeed due to ibogaine's hallucinogenic properties, the US has classified ibogaine in the same category as LSD (a Schedule 1 hallucinogenic drug).

On 11 February 2010 Medsafe gazetted ibogaine and its metabolite, noribogaine as Prescription Medicines under the Medicines Act

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1981.^{9,10} Thus the use of ibogaine or its metabolite for the therapeutic purpose of managing or treating addiction needs to be under medical supervision. It is important to be cognisant of the fact that although ibogaine (or noribogaine) is classified as a prescription medicine, the medicine and its use has not been approved, nor has its safety, quality and efficacy been evaluated by Medsafe. Nevertheless, Section 25 of the Medicines Act permits a NZ-registered medical practitioner to prescribe, procure and administer unapproved medicines for the treatment of a patient in his or her care.¹¹ The Code of Health and Disability Services Consumers' Rights then places obligations on the medical practitioner i.e. 'The consumer has the right to treatment of an appropriate ethical and professional standard...' and '...requires written consent for experimental use of a medicine'.¹²

We believe that prescribers and medical professionals should be cautious before promoting ibogaine as a 'treatment option' until there is a robust body of knowledge about its efficacy and safety in humans. This caution is endorsed by the New Zealand Drug Foundation (personal communication, Ross Bell).¹³

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