THE NEAR-DEATH EXPERIENCE

I commend Drs Suster Strubelt and Uwe Maas for their creative article "The Near-Death Experience: A Cerebellar Method to Protect Body and Soul—Lessons From the Iboga Healing Ceremony in Gabon" that appeared in the Jan/Feb issue (Altern Ther Health Med 2008;14(1):30-34). The stated aim of the study was "to gain new insights into neurological correlates of near-death experiences" by integrating the neuroscience and ethological literatures. This is an admirable goal, with important implications for spiritual development and alternative healing. The authors have marshaled an impressive body of neurophysiological data and have constructed a plausible hypothesis to explain iboga rituals and near-death experiences. However, I am not sure that we know enough yet to answer their first research question: "Are iboga visions and near-death experiences based on a common neurological mechanism?" This provocative and fascinating article raised for me more questions than it answered—which may be a hallmark of productive science.

The authors noted that the Gabonese iboga ritual elicits experiences with many of the features and aftereffects of spontaneous near-death experiences. The iboga and near-death experiences are not identical, however. For example, iboga ritual participants maintain the ability to communicate verbally throughout their visions, whereas spontaneous near-death experiencers usually lose communication with the physical world around them, and the transformative effects of the iboga ritual are dependent on weeks of continuous emotional processing by healers, whereas the effects of near-death experiences follow the experience itself. It is unclear whether these distinctions are merely a matter of focusing of attention or whether they reflect fundamental substantive differences between these two kinds of experience.

The authors note that ischemia is thought to release potentially neurotoxic glutamine, leading to some unknown neuroprotective mechanism that through some unspecified pathways may produce near-death experiences. They further note that ibogaine, through unknown mechanisms, may also induce glutamatergic excitotoxicity, and they hypothesize that the glutamatergic toxicity that may be induced by ibogaine provokes the same neuroprotective mechanisms that are presumed to occur in ischemia.

This is a promising hypothesis, but there remain gaps in the story. First, glutamine release has never been demonstrated in near-death experiences. Second, we have no idea how the putative but unidentified neuroprotective mechanism might produce near-death experiences. Others have speculated that an endogenous ketamine-like neurochemical may play a role, but no such chemical has yet been found. Third, it is unclear how a neuroprotective effect that can be observed for weeks following focal ischemia could account for an experience that lasts only seconds to minutes. And fourth, this hypothetical ischemic neuroprotective mechanism would not explain the majority of near-death experiences that do not involve ischemia, such as in falls or automobile accidents.

The authors cite in support of their hypothesis a recent study by Schutter et al purportedly inducing an out-of-body experience by transcranial stimulation of the cerebrum. In fact, during a relaxation period following the stimulation (but not during the stimulation itself) Schutter et al's subject reported a sensation as of "her body falling/drifting side-ways and even out of the chair." This is, relaxing after the electrical stimulation induced an illusory feeling of the body moving, but it did not produce a feeling of leaving the body. Thus this interesting kinesthetic illusion is not relevant to out-of-body or near-death experiences.

The iboga ritual does appear to induce experiences with many features and aftereffects typical of spontaneous near-death experiences. Thus the neuropharmacology of ibogaine and related psychoactive alkaloids may provide valuable insights into the mechanisms of near-death experiences. But we should not let our enthusiasm for neurological explanation overpower our critical thinking. Illusions of bodies falling out of a chair should not be mistaken for out-of-body experiences, and proposed links to speculative hypotheses and unidentified pathways should not be mistaken for evidence of common neurological mechanisms. The potential benefits of studies such as this are wide-ranging and deserve thorough exploration. I applaud Strubelt and Maas's call for attention to spiritual experience in the clinical use of ibogaine therapies for drug addiction and for further research combining physiology and spirituality.

Sincerely,
Bruce Greyson, MD
 Carlson Professor of Psychiatry and Neurobehavioral Sciences
 Director, Division of Perceptual Studies
 Department of Psychiatry and Neurobehavioral Sciences
 University of Virginia Health System
 Charlottesville

REFERENCES

Response From Drs Strubelt and Maas

Dear Dr Greyson,

Thank you very much for your appreciation of our article and for your critical comments.

We do not claim to have a physiological explanation for the complex spiritual experience of near-death experiences, and we suppose that no one who ever had such an experience will be optimistic that mankind will ever get it. But we are optimistic...