

# Comments on "A Neurobiological Model for Near-Death Experiences"

Russell Noyes, M.D.  
*University of Iowa*

"A Neurobiological Model for Near-Death Experiences" by Juan C. Saavedra-Aguilar and Juan S. Gómez-Jeria seems well done and thought-provoking, but their model seems to mix concepts, such as epileptic phenomena, neurotransmitter activity, and the effects of hypoxia. I wonder if the authors are attempting too much at once. I like the effort to link near-death experiences (NDEs) to temporal lobe seizure activity, but I feel bringing in neurotransmitters switches to another level, and it seems difficult to put these together. I think a strong case can be made for temporal lobe involvement, and this might be enough to put forth at one time.

Of course, epileptic phenomena are abnormal, and the authors' model suggests that near-death phenomena are likewise abnormal and therefore without adaptive potential or meaning. The authors do not discuss these particular implications. They indicate that NDEs by definition involve anoxia, but we know that some occur without physical injury or illness. Do the authors mean that the threat itself, by causing panic or some similar stress response, may produce anoxia? This may be the case, as some cerebral blood flow studies during lactate-induced panic have shown. However, they should perhaps be explicit about this. They need, I think, to define just what they mean by near-death experience.

I would like to see the authors do two things in proposing their model. The first is to indicate how it may help us to understand near-

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Dr. Noyes is Professor of Psychiatry at the University of Iowa. Requests for reprints should be addressed to Dr. Noyes at the University of Iowa College of Medicine, Department of Psychiatry, Psychiatric Hospital, 500 Newton Road, Iowa City, IA 52242.

death phenomena. There might be a number of ways, but it would help if these could be stated. Secondly, they should indicate how their model might be tested. Might it be tested in animals, or with administration of certain drugs, for example? Might study of temporal lobe seizure patients be fruitful?