

# Effects of NO Synthase Blocker L-NAME on Functional State of the Neuromotor System during Traumatic Disease of the Spinal Cord

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## Abstract

© 2017, Springer Science+Business Media New York. Functional state of the neuromotor system after administration of a nonspecific NO synthase blocker L-NAME was studied on the model of experimental contusion of the spinal cord. Electron paramagnetic resonance measurements of NO production in the damaged segment of the spinal cord were performed for estimation of the dynamics of intensity of NO production during traumatic disease of the spinal cord and selection of optimal period for L-NAME administration. The status of the neuromotor system was evaluated by stimulation electromyography. Treatment with L-NAME during the acute period of traumatic injury to the spinal cord sharply reduced the intensity of evoked motor responses and more pronounced increase in excitability of peripheral motor structures. The results suggest that NO system is a factor of regulation of the stress-induced and adaptive responses of the body at the early stage of spinal cord injury.

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## Keywords

electron paramagnetic resonance, electroneuromyography, L-NAME blocker, nitrogen oxide, spinal cord

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