

Nitric oxide donors as treatment for grass induced acute laminitis in ponies.

: Equine Vet J. 1996 Jan;28(1):17-28. Links

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[Equine Vet J. 1996 Jan;28\(1\):1-2.](#)

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The potential for participation of the arginine-nitric oxide system in the aetiology of acute equine laminitis has been assessed. Nitric oxide (NO), produced by the action of NO synthase (NOS) on its substrate l-arginine, relaxes vascular smooth muscle to cause vasodilation. An attenuated normal vasodilatory tone may characterize the pathogenesis of acute equine laminitis. An intravenous infusion of 10% l-arginine in 0.9% saline caused vasodilatation in the hoof of a normal pony and immediate reperfusion of laminal tissues in an acutely laminitic pony, detected noninvasively by near infrared spectroscopy (NIRS), but the amino acid had little effect on systemic blood pressure. Treatment of acute laminitis with glyceryl trinitrate applied topically to the pasterns reduced the typical 'bounding pulses' in treated limbs, reduced lameness and lowered systemic blood pressure. **Nitric oxide is likely to participate in the multifactorial pathogenesis of equine laminitis.**

NOTE: this study was performed with unopposed arginine which is a free radical and will create other damage. Our ADNO formulas have antioxidants in them to prevent any free radical damage while the body uses the NO to heal itself.