New antidote for smoke-related cyanide toxicity shows promise

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Smoke inhalation is the major cause of death in fire victims due to cyanide poisoning. However, new research presented at CHEST 2012, the annual meeting of the American College of Chest Physicians, shows that a new antidote, cobinamide, may help reverse the effects of cyanide toxicity.

Researchers from multiple institutions, including the University of California Irvine Medical Center, exposed six ventilator-supported New Zealand white rabbits to cold smoke breaths until toxic carbon monoxide levels were achieved, concurrent with intravenous cyanide infusion.

Intravenous cobinamide was administered in treatment arm animals and compared with control responses.

Results showed that intravenous cobinamide reversed cyanide toxicity in these animals in the face of smoke-induced carbon monoxide exposure, without evident adverse effects.

Researchers concluded that cobinamide shows promise as a potential antidote for cyanide poisoning in smoke inhalation victims and that it could potentially be administered in mass casualty exposure scenarios.

This study was presented during CHEST 2012, the annual meeting of the American College of Chest Physicians, held October 20 – 25, in Atlanta, Georgia.