

New approach to stroke therapy

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LMU researchers developed a new strategy for the treatment of stroke, which could help to improve blood flow to ischemic brain. Strokes are due to a localized reduction in the blood supply to the brain, mainly due to the blockage of a vessel by a blood clot. This can lead to the death and irreversible loss of nerve cells. In about 90% of cases, no dedicated treatment is available that can effectively prevent serious damage following an acute stroke.

A team led by LMU researcher Professor Nikolaus Plesnila has now shown, in an animal model, that inhalation of nitric oxide (NO), a chemical compound which is itself toxic, can improve perfusion of the brain in the aftermath of an [acute stroke](#). Brain function in treated animals was significantly improved as compared to in controls that had not been given NO.

"In collaboration with colleagues at Harvard Medical School, we have just begun to test whether or not NO has a comparable effect in humans. If so, we could then initiate a full-scale international clinical study," says Plesnila. "If such a trial were successful, the new therapy could be introduced into the clinic very quickly. NO is already widely used for the management of several lung diseases, and could even be administered as required in ambulances and other rescue vehicles."(suwe/PH)

([Circulation Research](#), 2. March 2012)

More information: Inhalation of Nitric Oxide Prevents Ischemic Brain Damage in Experimental Stroke by Selective Dilatation of Collateral Arterioles, N.A. Terpolilli et al. *Circulation Research*, 2012;

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