

Laser sheds light on stroke patients

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A technique that creates and images blood clots in the brain may help researchers understand the small strokes implicated in many forms of dementia.

University of California, San Diego researchers used a laser to trigger the formation of individual blood clots in tiny arteries of the brains of anesthetized rats to monitor the resulting changes in blood flow.

They say their study provides a way to understand small strokes common in elderly humans. These strokes often cause no immediate symptoms, but they are thought to contribute to dementia and may ultimately cause larger strokes.

The study is published in the online edition of the journal Public Library of Science Biology.

In the study, the team members used tightly focused laser light to excite a dye that they had injected into the bloodstream. The excited dye reacted with oxygen to form a free radical, which "nicked" the cells lining the blood vessel at the target location, and triggered the natural blood clotting cascade.

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