

Vaccine shows potential to protect the brain before a stroke

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A type of vaccine previously studied to treat high blood pressure may have the potential to protect the brain when administered before a stroke, according to an animal study presented at the American Stroke Association's International Stroke Conference 2016.

Japanese researchers tested a [peptide vaccine](#) targeting the hormone angiotensin II (Ang II) a key player in [high blood pressure](#). Members of the research team previously had found that their peptide vaccine decreased blood pressure in a mouse model of hypertension, while the blood pressure of mice with normal readings was unaffected. The hormone also has been linked to patients' prognosis after a ischemic (clot-caused) stroke.

In the new study, researchers injected 53 male [rats](#) with the vaccine three times, at ages 4, 6 and 7 weeks old, and administered a second group of 41 with saline at the same intervals. Stroke was induced in vaccinated rats and rats that were given saline.

The team then measured levels of anti-Ang II antibody in the blood and brains of the rats that received the vaccine and had a stroke. Compared with rats that had low blood levels of antibody, the animals with high levels in the blood had more anti-Ang II antibodies in functional tissue at the side of the brain where the stroke occurred. Researchers also noted that vaccinated rats that produced high blood levels of antibody had less damage to the brain and fewer degenerated neurons.

Because the Ang II peptide vaccine is long-lasting, has anti-inflammatory effects and appears able to protect the brain after a blood vessel blockage, it has potential to be a therapy for high blood pressure and [stroke prevention](#), researchers said.

Provided by American Heart Association

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