

Vitamin B3 shows early promise in treatment of stroke

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An early study suggests that vitamin B3 or niacin, a common water-soluble vitamin, may help improve neurological function after stroke, according to Henry Ford Hospital researchers.

When rats with ischemic stroke were given niacin, their brains showed growth of new blood vessels, and sprouting of [nerve cells](#) which greatly improved neurological outcome.

Now research is underway at Henry Ford to investigate the effects of an extended-release form of niacin on stroke patients. Henry Ford is the only site nationally conducting such a study.

"If this proves to also work well in our human trials, we'll then have the benefit of a low-cost, easily-tolerable treatment for one of the most neurologically devastating conditions," Michael Chopp, Ph.D., scientific director of the Henry Ford Neuroscience Institute.

Dr. Chopp will present results from the animal model study at the International Stroke Conference in San Antonio.

According to the National Stroke Association, stroke is the third-leading cause of death in America and a leading cause of disability.

Ischemic strokes occur as a result of an obstruction within a blood vessel supplying blood to the brain. [Ischemic stroke](#) accounts for about 87 percent of all cases. One underlying condition for this type of

obstruction is the development of fatty cholesterol deposits lining the vessel walls.

Niacin is known to be the most effective medicine in current clinical use for increasing high-density lipoprotein cholesterol (HDL-C), which helps those fatty deposits.

Dr. Chopp and his colleagues found that in animals niacin helps restore neurological function in the brain following stroke.

In 2009, stroke physicians at Henry Ford Hospital published research which showed that HDL-C is abnormally low at the time stroke patients arrive at the hospital.

Dr. Chopp's research found that in animals, niacin increased "good" cholesterol (HDL-C), which increased blood vessels in the brain and axonal and dendritic growth leading to a substantial improvement in neurological function.

"Niacin essentially re-wires the brain which has very exciting potential for use in humans," says Dr. Chopp. "The results of this study may also open doors in other areas of neurological medicine, including brain injury."

Andrew Russman, D.O., is the principal investigator of the team at Henry Ford Hospital who will evaluate in clinical trials whether niacin improves recovery for human stroke patients.

"If we are able to prove that treating patients with niacin helps to restore [neurological function](#) after stroke, we're opening a whole new avenue of treatment for the leading cause of serious long-term disability in adults," says Dr. Russman.

Provided by Henry Ford Health System

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