

## **New Alzheimer's Treatment Could Be on the Horizon** **Potential of immune system treatment is 'exciting,' expert says**

**By Jennifer Thomas**  
**HealthDay Reporter**

MONDAY, July 20 (HealthDay News) -- A treatment already used to bolster the immune systems of people with leukemia and other serious diseases might also help ward off Alzheimer's disease, new research suggests.

Researchers looked at the association between the use of intravenous immunoglobulin (IVIg) and the occurrence of Alzheimer's. "IVIg has been used safely for more than 20 years to treat other diseases but is thought to have an indirect effect on Alzheimer's disease by targeting beta-amyloid, or plaques, in the brain," said Dr. Howard Fillit, a clinical professor of geriatrics and medicine at Mount Sinai Medical Center in New York City and the study's lead author.

To assess the effectiveness of IVIg against Alzheimer's disease, researchers analyzed the medical records of 847 people ages 65 and older who'd had at least one IVIg treatment at some point in their life and 84,700 people of the same age who had never received IVIg.

They found that those who had received IVIg were 42 percent less likely to develop Alzheimer's disease. Put another way, about 2.8 percent of those treated with IVIg developed Alzheimer's disease, compared with 4.8 percent of those not treated.

The study was funded in part by Baxter Bioscience, part of the pharmaceutical company that makes IVIg, and one of the four study authors worked for the company. The findings are published in the July 21 issue of *Neurology*.

"It's exciting," Fillit said of the results. "The study supports the idea that IVIg could be useful for treating Alzheimer's disease. We desperately need disease-modifying treatments for Alzheimer's."

A progressive, neurodegenerative disorder, Alzheimer's afflicts 2.4 to 4.5 million people in the United States, mostly those older than 65, according to the U.S. National Institute on Aging. The disease is marked by a buildup in the brain of plaques made up of beta-amyloid proteins. The plaque is believed to be toxic to the brain, causing cell death over time and a progressive loss of cognitive function, Fillit said.

IVIg, which contains antibodies derived from purified human plasma, is used to treat certain immune deficiencies, autoimmune diseases and cancers.

Though researchers aren't sure of the precise mechanism, it's possible that older people lack sufficient antibodies to beta-amyloid proteins, causing the plaque to accumulate. Fillit said that IVIg might help by giving the immune system a boost and slowing down, or preventing, the buildup of the toxic plaque.

Several drug companies are also at work developing monoclonal antibodies, or artificially produced drugs, to prevent the beta-amyloid buildup.

Despite the study's promising results, the researchers said, they're not suggesting that IVIg be given as a treatment for Alzheimer's yet. A phase 3 clinical trial testing IVIg as an Alzheimer's treatment is under way, also sponsored by Baxter.

Participants in the trial are getting infusions of IVIg or a placebo every two weeks for 70 weeks, according to the U.S. National Institute of Health's online registry of clinical trials, [www.clinicaltrials.gov](http://www.clinicaltrials.gov).

The trial, which will include an estimated 360 participants, is expected to be completed in July 2011.

If the clinical trial shows that IVIg is beneficial, it could be a potent new weapon against Alzheimer's, treating the underlying cause of the disease rather than just the symptoms, Fillit said.

"I don't think we would recommend doctors do it right now, but if the clinical study works, then there's potential that doctors could start using it as soon as the results are known," he said.

Dr. Victor Henderson, a professor of epidemiology and neurology at Stanford University in California, said he agrees with the need for a clinical trial to effectively assess the value of IVIg.

Among people whose records were examined as part of the study reported in *Neurology*, he noted, those who had received IVIg had other serious illnesses, which might have meant doctors were less likely to burden them further with a diagnosis of Alzheimer's, Henderson said.

He said it's also possible that early signs of Alzheimer's, such as confusion or forgetfulness, were attributed to other drugs they'd taken or the rigors of coping with the other disease, a factor researchers also noted in the study.

"It's a study with results that deserve follow-up confirmation, and the best way to do that is through a properly designed clinical trial," Henderson said. "The findings do make sense as far as our understanding of the basic underlying biology of the disease."

### **More information**

The U.S. National Institute on Aging has more on [\*\*Alzheimer's disease\*\*](#).

SOURCES: Howard Fillit, M.D., clinical professor, geriatrics, neuroscience and medicine, Mount Sinai School of Medicine, New York City; Victor Henderson, M.D., professor, epidemiology and neurology, School of Medicine, Stanford University, Stanford, Calif.; July 21, 2009, *Neurology*

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