

**Mayo Clinic News Network**

**Title: Immunotherapy for Alzheimer’s Disease** / Date: January 2017

Intro: Alzheimer’s disease affects nearly 5 ½ million Americans. That number is expected to triple by the year 2050, if effective treatments cannot be found. Alzheimer’s has no cure and the five medications the U.S. Food and Drug Administration has approved for treating it only treat symptoms temporarily.

In an effort to find a breakthrough, researchers are turning to new types of drugs. “I think the approach using immunotherapy is very popular right now,” says the director of the Alzheimer's Disease Research Center at Mayo Clinic, Ronald Petersen, M.D., Ph.D. “So, by this, we mean that we are giving antibodies to individuals” to counteract degenerative changes in the brain.

The antibodies target unwanted excess proteins, ideally before they can kill nerve cells in the brain, explains researcher and behavioral neurologist David Knopman, M.D. Among the nearly two dozen clinical trials underway at Mayo Clinic to fight Alzheimer’s is one called the A4 Study. Dr. Knopman says, “The A4 trial was conceived as a way to try to prevent the cognitive impairment of Alzheimer’s disease from occurring in the first place.” With more information, here’s Dennis Douda for the Mayo Clinic News Network.

**Video**

**Audio**

<b>Total running time [2:40]</b>	/// VIDEO
Dennis Douda speaking	At age 83, Tom Hines says his memory still serves him well.
<b>TITLE: Tom Hines Clinical Trial Participant</b>	<b>“Not as good as it was 25-30 years ago, but it’s pretty good.”</b>
Dennis Douda speaking	Maintaining a healthy brain and avoiding dementia are top of mind concerns for Tom.
Tom Hines speaking	<b>“Because I don’t want to die the way my mother did. It was pretty sad.”</b>
Dennis Douda speaking	Tom hopes his activities, like reading and part time accounting work, lower his risk. As an added step, he’s volunteered to help Mayo Clinic researchers test an Alzheimer’s disease prevention drug.
Tom Hines speaking	<b>“You must be asymptomatic for Alzheimer’s to qualify for the study. So, I ain’t got it.”</b>
Dennis Douda speaking	What Tom and the other study participants do have are elevated levels of beta amyloid plaque accumulating in their brains. It can be seen using positron emission tomography, or PET scan imaging. A special dye makes the amyloid deposits glow in shades of bright orange.
<b>TITLE: David Knopman, M.D. Mayo Clinic Neurology</b>	<b>“There’s a very long lag time between when that elevation begins to occur and</b>

	when people develop symptoms, 15 to 20 years.”
<b>TITLE: Ronald Petersen, M.D., Ph.D. Mayo Clinic Alzheimer’s Research Center</b>	<b>“So what if we are able to image somebody who’s clinically normal, find that they have, say, the amyloid protein in the brain, treat that, try to remove that protein from the brain to prevent them from becoming clinically impaired down the road?”</b>
Dennis Douda speaking	A multi-site, international study is trying to answer that question. Tom is 1 of about 1100 people who’ll be studied in the A4 trial. Each month for three years he’ll receive an intravenous infusion into his blood stream.
Dr. David Knopman speaking	<b>“In the study, half the people are getting the solanezumab – the active therapy – and half are getting a placebo.”</b>
Dennis Douda speaking	Solanezumab is an antibody, a form of passive immunotherapy that’s intended to interfere with beta amyloid formation and perhaps even reverse it.
Dr. Ronald Petersen speaking	<b>“Preliminary data have indicated that some of these antibodies are, in fact, effective at removing amyloid from the brain.”</b>
Dennis Douda speaking	In another clinical trial involving patients with more advanced disease, solanezumab’s maker, Eli Lilly, recently announced that the drug failed to remove enough amyloid to be effective. However, Mayo researchers remain hopeful that the A4 trial might yield better results.
Dr. David Knopman speaking	<b>“There’s a strong scientific rationale for doing this study, and it’s different. It’s fundamentally different than treating people who already have established Alzheimer’s disease dementia.”</b>
Dr. Ronald Petersen speaking	<b>“So I think that’s the underlying thought – that the earlier we intervene, the better we will be and perhaps we can even prevent the disease.”</b>
Dennis Douda speaking	For the Mayo Clinic News Network, I’m Dennis Douda.

**Anchor tag:** The A4 trial is still enrolling volunteers for this study. Relatively healthy individuals 65 to 85 years old can get more information at [a4study.org](http://a4study.org).