

**Mayo Clinic News Network**

**Title: Mayo Clinic Minute: Is Alzheimer's Type 3 diabetes?**      Date: Nov 7, 2017

Intro: Are some cases of [Alzheimer's](#) disease triggered by a form of [diabetes](#) in the brain? Perhaps they are, according to researchers. [Mayo Clinic's](#) campuses in Rochester, Minnesota, and Jacksonville, Florida, recently participated in a multi-institution clinical study, testing whether a new insulin nasal spray can improve Alzheimer's symptoms.

“This study has furthered our understanding of the gene that is the strongest genetic risk factor known for Alzheimer's disease,” says [Dr. Guojun Bu, Ph.D.](#), a Mayo Clinic neuroscientist. "About 20 percent of the human population carries this riskier form of [the gene] APOE, called the E4," says Dr. Bu.

It's believed that more than 50 percent of Alzheimer's cases can be linked to APOE4, according to the study, which was published in [Neuron](#). Dennis Douda reports.

Video	Audio
<b>Total running time [0:00]</b>	<b>/// VIDEO</b>
<b>Dennis Douda speaking</b>	It's an accepted fact that people with Type 2 diabetes have a higher risk of Alzheimer's disease. One reason may be reduced blood flow to the brain because of damaged blood vessels.
<b>TITLE: Guojun Bu, Ph.D. Neuroscience Mayo Clinic</b>	<b>"And, therefore, the supply of essential nutrients to the brain is also impaired."</b>
<b>Dennis Douda speaking</b>	Dr. Guojun Bu, a Mayo Clinic neuroscientist, has found genetics may also be to blame. A variant of the so-called Alzheimer's gene, APOE4, seems to interfere with brain cells' ability to use insulin, which may eventually cause the cells to starve and die. Unofficially, it's called Type 3 diabetes.
<b>Dr. Guojun Bu speaking</b>	<b>"What it refers [to] is that their brain's insulin utilization or signaling is not functioning. Their risk of developing Alzheimer's disease is about 10 to 15 times higher."</b>
<b>Dennis Douda speaking</b>	Researchers wondered if it is diabetes of the brain, could insulin delivered in an intra-nasal mist help? A phase 2 clinical trial raised hope.
<b>Dr. Guojun Bu speaking</b>	<b>"The outcome is very positive. The patients' cognitive decline is slowed, if not improved."</b>
<b>Dennis Douda speaking</b>	For the Mayo Clinic News Network, I'm Dennis Douda.

Anchor tag: The multicenter research study will now expand into a broader phase 3 trial with the backing of the National Institutes of Health.