

New study shows people with glaucoma are at significant risk of Alzheimer's disease

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A large, nationwide study from Taiwan shows that people with a specific type of glaucoma, called normal-tension glaucoma, are at high risk for developing Alzheimer's disease. The researchers say people with this type of glaucoma should be screened for Alzheimer's disease. The study will be presented at AAO 2022, the 126th annual meeting of the American Academy of Ophthalmology.

Glaucoma is a group of eye diseases that damage the optic nerve, the tissue that connects the eye to the brain. The most common types of glaucoma involve abnormally high pressure inside the eye. But normal-tension glaucoma, also known as low-tension glaucoma, is a form of glaucoma in which damage occurs to the optic nerve even though eye pressure is within the normal range.

Previous studies evaluating the link between glaucoma and Alzheimer's disease offer mixed results, but few studies focused only on normal-tension glaucoma.

To learn more, researchers analyzed data from the Taiwan National Health Insurance Research

Database collected over a 12-year period. They compared the incidence of Alzheimer's in 15,317 people with normal-tension glaucoma and 61,268 age- and gender-matched people without glaucoma.

After adjusting for diabetes, hypertension, hyperlipidemia, [coronary artery disease](#) and stroke, they found that people with normal-tension glaucoma were 52 percent more likely to develop Alzheimer's compared with those without glaucoma. Those who were older, female or had a history of stroke had the highest incidence. Additionally, they found that use of glaucoma eye drops did not protect against Alzheimer's disease or increase the incidence.

"From a [public health perspective](#), policy makers are encouraged to enforce Alzheimer's screening for at-risk patients with normal-tension glaucoma and to provide more substantial and integrated care," said lead researcher Yu-Yen Chen, MD, Ph.D. from the Taichung Veterans General Hospital in Taiwan.

While not everyone with glaucoma will develop Alzheimer's disease, this study underscores how they are related. They both occur when [nerve cells](#) deteriorate and die, a process called neurodegeneration. In glaucoma, neurodegeneration affects the [retinal ganglion cells](#) in the [optic nerve](#), causing blindness over time. In Alzheimer's, it affects nerve cells in the brain responsible for memory and cognition.

It is hoped that further investigation into the similarities and differences between these illnesses will reveal new treatments for both conditions.

More information: Conference: aao.apprisor.org/apsHome.cfm

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