

# Study links diabetes medications to glaucoma prevention

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A popular class of diabetes medications called GLP-1R agonists (Trulicity and Rybelsus) may also protect against glaucoma in diabetic patients, according to a new study led by researchers in the Scheie Eye Institute at the University of Pennsylvania's Perelman School of Medicine. The findings were published in the *British Journal of Ophthalmology*.

The researchers looked at retrospective data of 1,961 [diabetic patients](#) who were new users of this class of drugs and matched them to 4,371 unexposed control subjects. After 150 days on average, 10 patients in the medicated group were newly diagnosed with [glaucoma](#) (0.5 percent) compared to 58 patients (1.3 percent) in the control group. The findings suggest that GLP-1 receptor agonists may decrease a diabetic patient's risk of developing glaucoma by half.

The findings are supported [by a Penn Medicine study from 2020](#), which found that GLP-1R agonists reduced neuroinflammation and prevented retinal ganglion cell death in mice. This class of drugs has also shown similarly protective effects against Alzheimer's and Parkinson's diseases in animal models, and [clinical trials](#) are underway to test the medications against [neurodegenerative diseases](#) in humans.

Glaucoma affects 3 million Americans and is the second leading cause of blindness worldwide. People with diabetes are twice as likely to develop the eye condition.

"It was very encouraging to see that a popular diabetes medication could significantly reduce the risk of developing glaucoma, and our study suggests that these medications warrant further study in this patient population," says Qi N. Cui, MD, Ph.D., with Brian VanderBeek, MD, MPH, both assistant professors of Ophthalmology at Penn.

**More information:** Jacob Sterling et al, Glucagon-like peptide 1 receptor agonist use is associated with reduced risk for glaucoma, *British Journal of Ophthalmology* (2021). [DOI: 10.1136/bjophthalmol-2021-319232](#)

Provided by Perelman School of Medicine at the University of

## Pennsylvania

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