

What Is Glaucoma?

Glaucoma is an eye disease that can cause blindness.

Glaucoma is a chronic, progressive disease involving damage to nerve fibers in the eye and the optic nerve, which transmits visual signals to the brain. Glaucoma is the most common cause of irreversible blindness worldwide, affecting about 3 million people in the US.

Who Is at Increased Risk for Glaucoma?

Risk factors for glaucoma include older age, having a family history of glaucoma, and having increased pressure inside the eye (elevated intraocular pressure). Some medical conditions (such as rheumatoid arthritis, lupus, diabetes, and migraines), some infectious diseases (such as herpes simplex virus, chickenpox, and syphilis), and certain medications (such as corticosteroids and some antidepressants) are linked with glaucoma.

Common Types of Glaucoma and Their Symptoms

Open-angle glaucoma accounts for more than 90% of cases of glaucoma, and it occurs when fluid in the eye is unable to drain properly. Most people with open-angle glaucoma have no symptoms initially. As the disease progresses, patients can develop problems with peripheral vision and, sometimes, central vision, causing difficulty with reading, walking, and driving.

Chronic angle-closure glaucoma is characterized by slow, progressive obstruction of fluid drainage from the eye. Patients with this type of glaucoma can have periodic visual symptoms, but they are often asymptomatic until the condition worsens, and they develop visual symptoms similar to open-angle glaucoma.

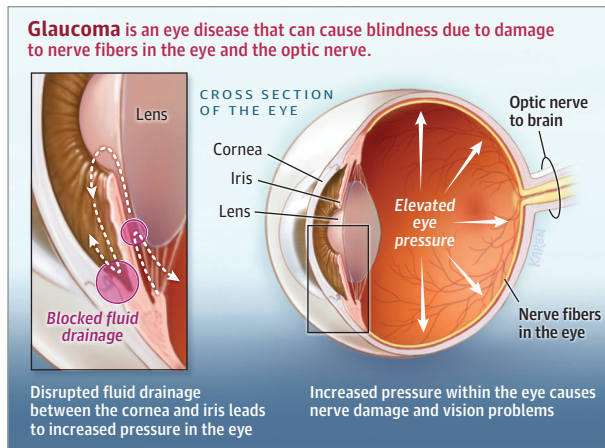
Acute angle-closure glaucoma is caused by acute obstruction of fluid drainage from the eye, leading to blurry vision, halos around lights, eye pain, nausea, vomiting, and rapid vision loss. This type of glaucoma requires emergency treatment to decrease intraocular pressure and prevent rapid onset of blindness.

Who Should Be Screened for Glaucoma?

The US Preventive Services Task Force recommendation from 2022 concluded that there is [insufficient evidence](#) to assess the benefits and harms of screening for open-angle glaucoma in asymptomatic individuals aged 40 years or older. However, people at elevated risk for glaucoma, such as those with a family history of this condition, should undergo periodic evaluation by an eye care professional to check for signs of glaucoma.

How Is Glaucoma Diagnosed and Treated?

Eye care professionals diagnose glaucoma with several tests, including measurement of intraocular pressure, visual field testing,



dilated eye examination to assess the optic nerve, measurement of corneal thickness, and assessment of the angle in the eye between the iris and cornea. Other tests for glaucoma include [optical coherence tomography](#) (which takes pictures of the back of the eye) and optic disc photography.

Glaucoma is treated with medications or procedures to lower intraocular pressure. The most commonly used topical eye drops for glaucoma are prostaglandin analogues. Other eye drop medications for glaucoma include β -blockers, carbonic anhydrase inhibitors, α -agonists, and rho kinase inhibitors. Laser trabeculoplasty, a procedure that helps drain fluid from the eye, is another common treatment for open-angle glaucoma. A different laser procedure is performed for angle-closure glaucoma. Occasionally, patients undergo surgery to prevent worsening of glaucoma.

How Often Does Glaucoma Cause Blindness?

Over a 20-year period, approximately 13% of patients with glaucoma develop blindness in one or both eyes. However, early detection of glaucoma and regular monitoring and treatment of elevated intraocular pressure by an eye care professional reduces the risk of blindness from glaucoma.

FOR MORE INFORMATION

[National Eye Institute](#)

Author: Rebecca Voelker, MSJ

Published Online: October 6, 2023. doi:10.1001/jama.2023.16311

Author Affiliation: Contributing Writer, JAMA.

Conflict of Interest Disclosures: None reported.

Sources: Stein JD, Khawaja AP, Weizer JS. Glaucoma in adults—screening, diagnosis, and management. *JAMA*. 2021;325(2):164-174. doi:10.1001/jama.2020.21899
Jin J. Screening for primary open-angle glaucoma. *JAMA*. 2022;327(20):2030. doi:10.1001/jama.2022.7531

The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA suggests that you consult your physician. This page may be downloaded or photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, email [reprints@jamanetwork.com](#).