

VITAL SIGNS

# Glaucoma 101 *Early detection essential*

BY JAKE POINIER

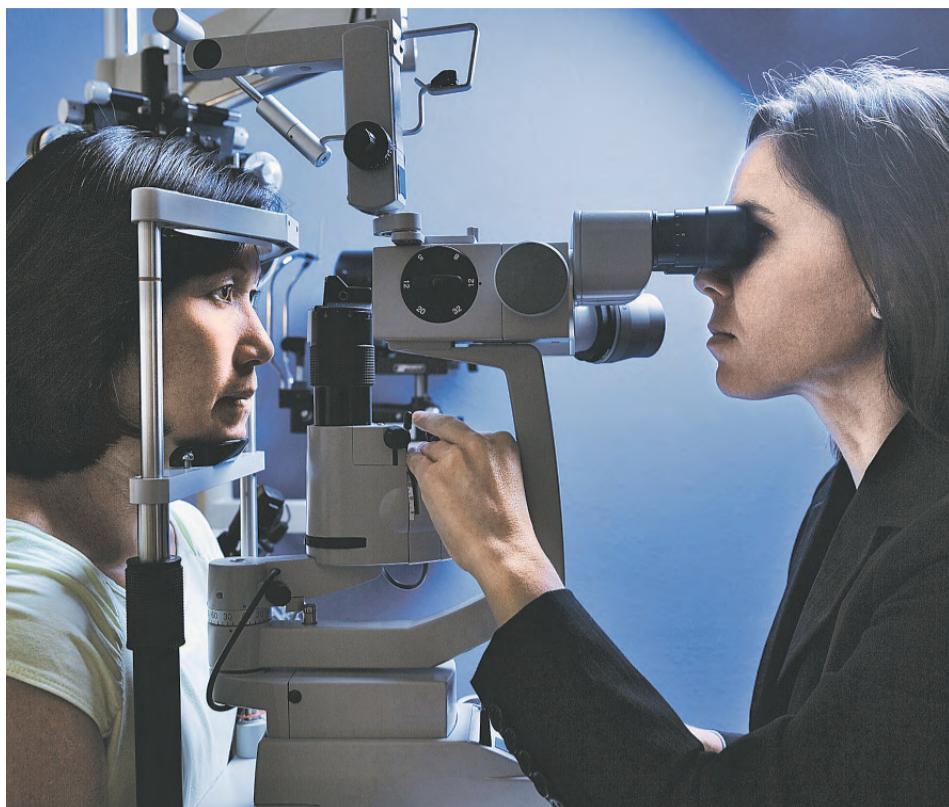
**K**nown as ‘the silent thief of sight,’ glaucoma is a group of disorders that damage the optic nerve and lead to gradual but irreversible vision loss.

“The eye is like a water-balloon filled with something similar to cerebrospinal fluid,” said Andrew Rabinowitz, M.D., a fellowship-trained glaucoma specialist who participates in medical and surgical treatment of glaucoma at Barnet Dulaney Perkins Eye Center. “Your body produces and drains the fluid, but in some cases, the drain gets clogged. Because the eye is a fixed structure, unlike a water-balloon, the pressure goes up and can cause damage to the nerve fibers between the back of the eye and the brain.”

### Eye exams

With no pain, signs or symptoms, early detection and treatment are essential for preventing or minimizing vision loss from glaucoma. As a first step, eye-care professionals will numb the patient’s eyes and use a device called a tonometer to determine the fluid pressure inside the eye, also known as intraocular pressure. Next, a complete eye exam will look at the patient’s optic nerve after dilating the pupils. Finally, and particularly if there is suspicion of optic nerve damage, a visual field test can be used to test optic nerve function.

“Typically, a patient is completely unaware of having the disease, which is why annual appointments are so important, particularly after age 40,” said Christina Sorenson, O.D., F.A.A.O., assistant dean of the Arizona College of Optometry at Midwestern University’s Glendale campus. “That’s especially true for patients with risk factors, such as a family history of glaucoma, or having high blood pressure or diabetes.” African-Americans over



age 40 and Mexican-Americans over age 60 also experience a higher prevalence of the disease.

### Treatments

For about 75 percent of patients, the disease can be managed solely through medicated eye drops. “They’re very safe, predictable and carry the least risk,” said Rabinowitz. “The next level of treatment is a low-level laser that stimulates the eye’s ability to clean its own drain.” The in-office procedure, Selective Laser Trabeculoplasty (SLT), takes just a minute or two while providing reduced pressure for as long as a year.

In circumstances where medication and laser therapy do not sufficiently decrease the pressure, surgery may be required to implant a drain or create an opening in the eye. (Less invasive methods are

currently in FDA trials, but not yet widely available.)

“There’s no free lunch,” Sorenson said.

“When you’re altering the anatomy, there’s always a risk. The resulting pressure can be too low, you can get fluid draining where it’s not desired or there can be new inflammation or vessel growth. We’re very fortunate that there are now some medications that you just need once a day, compared with what was available in the past. And thanks to early diagnosis, identification of risk factors and better treatment modalities, glaucoma is not as often the blinding disease it’s been in the past.”

### Facts about glaucoma

- It is estimated that more than **4 million Americans** have glaucoma, but only half of those know.
- Approximately **120,000 are blind from glaucoma**, accounting for 9 to 12 percent of all cases of blindness in the U.S.
- About **2 percent** of the population aged 40-50 and **8 percent** over age 70 have high eye pressure.
- Glaucoma is the **second-leading cause of blindness** in the world and the leading cause of blindness among African-Americans.

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