

## Do you have glaucoma and not know it?

Glaucoma is the leading cause of blindness among African Americans and individuals born in Jamaica, the Bahamas and Haiti.

In fact, the disease impacts six to eight times more African-Caribbeans than Caucasians every year and is the second leading cause of blindness worldwide. It can also affect any individual regardless of age, gender or race. More than four million Americans have glaucoma, but only half of those actually know they have the vision-threatening disease.

Glaucoma is a disease of the eye in which the eye pressure is too high for the optic nerve to tolerate. The optic nerve connects the eye to the brain and is responsible for transmitting the images we see. Glaucoma initially affects peripheral vision, which is one of the reasons why someone may have glaucoma for years and not even know it. The damage occurs insidiously, eventually affecting the central vision resulting in blindness. There is no cure for glaucoma, but proper management can control the disease and usually prevent vision loss. This is especially true if detected early.

There are many types of glaucoma, but the two general categories are open-angle glaucoma and closed-angle glaucoma. Open-angle glaucoma is the more common type in which the drainage system in the eye is open, but functioning inadequately. Patients usually do not have any symptoms, but this form of glaucoma is usually diagnosed by routine eye exams or when the patient sees the ophthalmologist for an unrelated problem. Patients at particular risk are those with diabetes and/or high blood pressure, those with a family history of glaucoma and those of African descent. Individuals from the Caribbean are at an especially high risk.

Unlike open-angle glaucoma, closed-angle glaucoma can cause rapid onset of symptoms such as pain, blurred vision, halos around lights headache, nausea and a red eye. The drainage system suddenly closes off, thereby producing a rapid increase in eye pressure. This is an emergent eye condition and must be treated immediately or permanent vision loss can result within hours. Patients who are prone to this condition are usually farsighted, have a maturing cataract and are middle-aged women.

How is glaucoma detected? Regular eye exams by an ophthalmologist or optometrist are the best way to detect glaucoma. During an eye exam your physician will: measure your eye pressure, inspect the drainage system of your eye, look at the optic nerve for any damage and test the peripheral vision of each eye (sometimes done using a computerized device). These tests and exams are all painless.

How is glaucoma diagnosed? A doctor will make this determination based on your risk factors, a complete eye exam and testing. Many patients are followed as "suspects" because they have some risk factors, but their doctor does not feel like they require treatment at that point. This is analogous to being a "borderline diabetic";

How is glaucoma treated? Damage already caused by glaucoma cannot be reversed, it is permanent. If the central vision has been affected, then the optic nerve damage is very advanced and will require urgent intervention. The goal of glaucoma treatment is to lower the eye pressure to a level at which no more damage takes place. There are three ways to do so — medicines, laser surgery and operative surgery. Medicines are the first line of therapy. Patients are usually started on one drop and then additional drops are added if the pressure is not adequately controlled. These are prescription medicines and have side effects just like a pill may have. The physician will choose the best medicine to lower the eye pressure while trying to avoid possible side effects. The laser is used in two ways depending on the type of glaucoma a patient has. For open-angle glaucoma the laser treats the drainage system to make it more efficient in draining fluid from within the eye. This procedure is called selective laser trabeculoplasty (SLT). In closed-angle glaucoma the laser creates a small hole in the iris (colored part of the eye) in order to improved flow of fluid to the drainage system.

Operative surgery is usually the last resort when medicines and laser surgery have incompletely controlled the eye pressure. The ophthalmologist (eye surgeon) uses surgical instruments to create a new drainage channel for fluid to drain from the inside of the eye. Surgery has more risks than medicines or laser surgery, but in this instance the doctor feels it is safer to operate than to allow the optic nerve damage to continue.

When should you be examined for glaucoma? Patients ages 20 to 39 years old should be examined every three to five years. Those 40 to 64 years old, every two to three years and 65 or older, every one to two years. However, African-Americans, patients with a family history of glaucoma or patients from the Caribbean should be seen at a younger age and may need to be followed more frequently.

Glaucoma is a manageable disease, but early intervention and treatment is essential to success.