

# GLAUCOMA

## What is glaucoma?

Glaucoma is an eye disorder that causes progressive damage to the optic nerve and loss of nerve tissue resulting in loss of vision, especially peripheral vision.

The optic nerve is a bundle of about one million individual nerve fibers that transmits the visual signals from the eye to the brain. A loss of these nerve fibers results in peripheral vision loss. Advanced glaucoma may even cause blindness.

## What causes glaucoma?

There are many types of glaucoma and many theories about the causes of glaucoma. The exact cause is unknown. Although the disease is usually associated with an increase in the fluid pressure inside the eye, other theories include lack of adequate blood supply to the optic nerve.

The most common form of glaucoma, primary open-angle glaucoma, is associated with an increase in the fluid pressure inside the eye. This increase in pressure may cause progressive

damage to the optic nerve and loss of nerve fibers. Not everyone with high eye pressure will develop glaucoma, and sometimes people with normal eye pressure will develop glaucoma. When the pressure inside an eye is too high for that individual, glaucoma will develop over time.

## Who gets glaucoma?

Glaucoma is the second leading cause of blindness in the United States. It most often occurs in people over 40, although a congenital or infantile form of glaucoma exists. People with a family history of glaucoma, African Americans over 40, and Hispanics over 60 are at an increased risk of developing glaucoma. Other risk factors include thinner corneas, chronic eye inflammation, and some medications that increase eye pressure.

It is estimated that more than two million Americans are being treated for glaucoma and millions more are unaware they have the disorder. These numbers are expected to rise as the population grows older. Primary open-angle glaucoma occurs more frequently in blacks than in whites, causing damage at an earlier age and leading to blindness at a greater rate. A yearly dilated eye examination is particularly important as a preventive eye care measure.

## How is glaucoma harmful?

Damage to the optic nerve is typically slow and painless, and a large portion of vision can be lost

before vision problems are noticed. The optic nerve, at the back of the eye, carries visual information to the brain. As the fibers that make up the optic nerve are damaged, the amount and quality of information sent to the brain decreases, and a loss of vision occurs.

## Will I go blind from glaucoma?

If diagnosed at an early stage, glaucoma can often be controlled and further vision loss may be minimized. If left untreated, first peripheral vision and eventually central vision will be affected and blindness may result.

## How can I tell if I have glaucoma?

The signs and symptoms of glaucoma can vary depending on the type. Primary open-angle glaucoma often develops slowly and painlessly, with no early warning signs. It can gradually destroy vision without the person knowing it. The first indication may occur after some vision has already been lost. Acute angle-closure glaucoma, which results from a sudden blockage of drainage channels in the eye, causes a rapid buildup of pressure accompanied by blurred vision, the appearance of colored rings around lights (haloes) and severe pain and redness of the eye.

## How is glaucoma detected?

A comprehensive dilated eye examination will include tests for glaucoma. A simple painless procedure called tonometry measures the



internal pressure of the eye. A measurement of corneal thickness, called pachymetry, helps confirm the eye pressure accuracy. A visual field assessment will measure the degree and sensitivity of retinal function. Additionally, an optic nerve optical coherence tomography (OCT) can reveal potential nerve fiber thinning associated with glaucoma. With these evaluations of the optic nerve, an optometrist can assess the potential for the development of glaucoma.

#### How is glaucoma treated?

The most common first-line treatment of glaucoma is prescription eye drops that must be taken regularly. In some cases, laser therapy or surgery may be required. The goal of the treatment is to prevent loss of vision.

#### Will my vision be restored after treatment?

Unfortunately, any vision loss as a result of glaucoma is usually permanent and cannot be restored. This is why regular preventive eye examinations are so important. Vision rehabilitation services that include the use of specialized optical devices and training may benefit individuals with severe vision loss.

#### Can glaucoma be prevented?

No, but early detection and treatment can control glaucoma, and greatly reduce the chances of permanent vision loss.

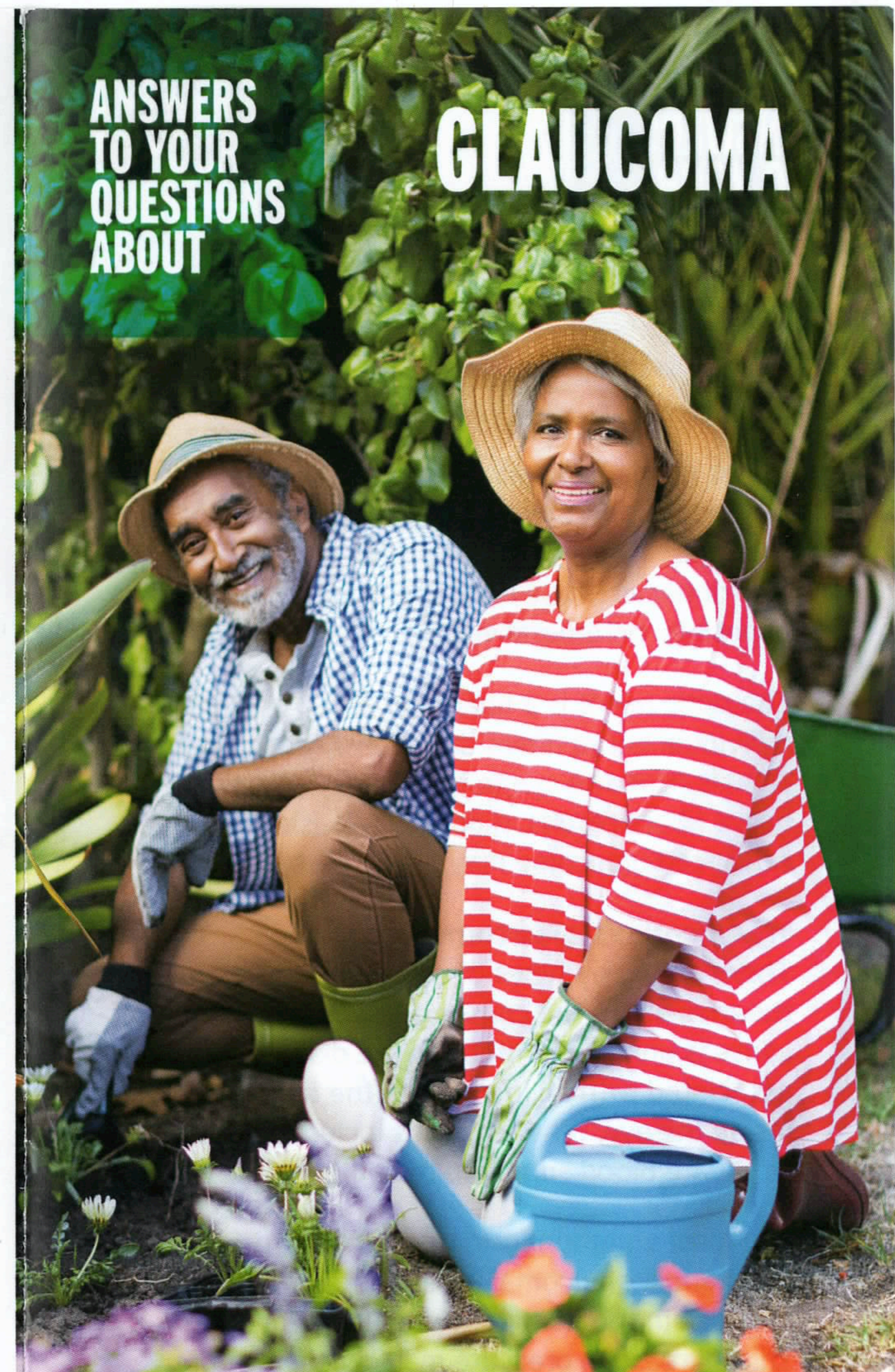
## Texas Lions Clubs District 2E-1



AMERICAN OPTOMETRIC ASSOCIATION

243 N. Lindbergh Blvd. | St. Louis, MO 63141  
800.365.2219 | [aoa.org](http://aoa.org)

To purchase additional copies,  
call 800.262.2210  
or visit [store.aoa.org](http://store.aoa.org)



AMERICAN OPTOMETRIC ASSOCIATION