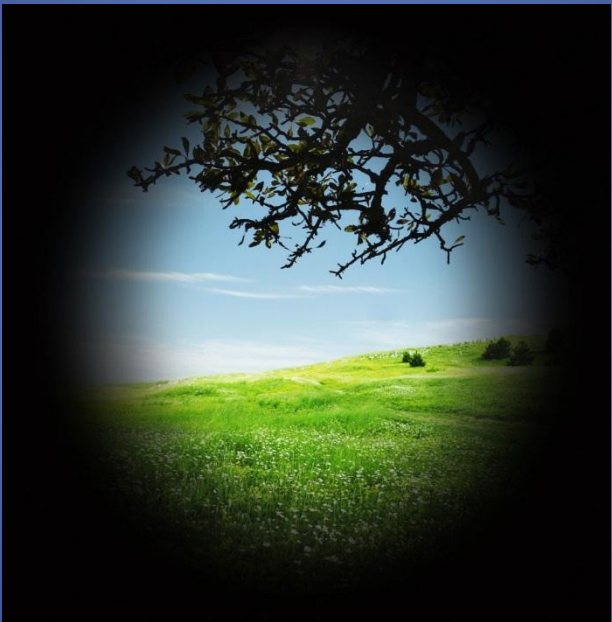


GLAUCOMA



PATIENT EDUCATION



Dr. Anil Kulkarni Eye Hospital



Ameya

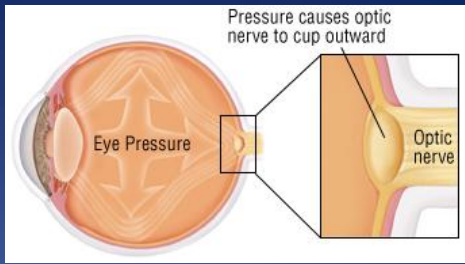
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What is Glaucoma?

Glaucoma is a common eye condition in which vision is lost because of damage to the optic nerve. The optic nerve carries

information about vision from the eye to the brain. In most cases, the optic nerve is damaged when the pressure of fluid inside the front part of the eye rises. However, glaucoma-related eye damage can occur even when the fluid pressure is normal.



“An untreated Glaucoma can result in a gradual, irreversible loss of vision and eventual blindness”

Glaucoma Tunnel Vision



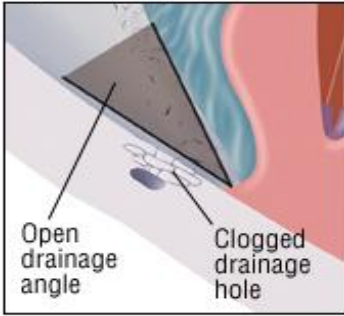
Normal

Moderate

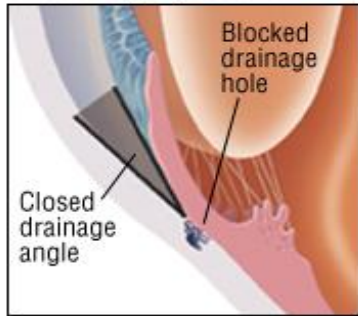
Severe

Types of Glaucoma

Open-angle glaucoma



Closed-angle glaucoma



In the most common form of glaucoma, called **Open Angle Glaucoma**: pressure tends to rise slowly over time. Patients present late in the disease. Gradual loss of vision is only the complaint.

A less common form of the disease, called **Closed Angle Glaucoma**, develops suddenly and usually causes eye pain and redness.

In addition, there are rarer forms of glaucoma. They may be related to eye defects that develop before birth (congenital glaucoma) or to eye injuries, eye tumors or medical problems such as diabetes. In some cases, medications, such as corticosteroids, also can trigger glaucoma.

Risk factors

- Age of 40 and older
- Family history of glaucoma
- high minus number
- Have diabetes, hypertension or heart disease
- Have high intraocular pressure (IOP)
- Experience eye pain due to previous surgery



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Symptoms

Although open angle glaucoma and closed angle glaucoma both can cause blindness, their symptoms are very different.

Open Angle Glaucoma — In this form of glaucoma, vision is lost painlessly and so gradually that most people do not realize they have a problem until substantial damage has occurred. Peripheral vision (at the edges) is usually lost first. As larger areas of your peripheral vision fade, you may develop tunnel vision — vision that has narrowed so you see only what is directly in front of you, like looking through a railroad tunnel. If glaucoma is not treated, even this narrowed vision disappears into blindness. Once gone, areas of lost vision cannot be restored.

Closed Angle Glaucoma — Symptoms of acute glaucoma occur suddenly and can include blurred vision, pain and redness in the eye, severe headache, halos around lights at night, a haziness in the cornea (the clear front portion of the eye in front of the pupil), nausea and vomiting, and extreme weakness.

Glaucoma is a lifelong illness, but proper treatment can prevent loss of vision.

Recommendations

- **Everyone under 40 years should have an eye examination atleast once in four years and after 40 atleast once in 2 years.**
- **Everyone under 40 years with one of the aforementioned risk factors should have an eye examination atleast once in 2 years and after 40 atleast once in a year.**



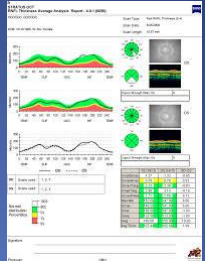
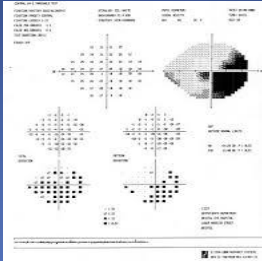
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Diagnosis

In most cases, **Open Angle Glaucoma** is diagnosed by a doctor during a routine eye examination. If glaucoma is suspected, your doctor will confirm the diagnosis with one or more additional tests:



Tonometry: measures the pressure within the eye.

Gonioscopy: to check if the angle is open or closed.

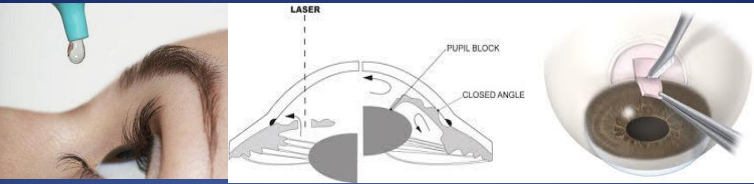
Visual-field testing: is the best way to find early signs of loss of peripheral vision. Most often, visual fields are checked using an automated machine.

OCT: This technique uses a LASER beam to actually measure the thickness of the nerve fibers in the retina. Glaucoma causes loss of these nerve fibers.

Closed Angle Glaucoma usually is diagnosed in a person who has developed a red, swollen eye and difficulties with vision. The eye pressure is usually quite high. Some people may be told by their eye doctor that they are at risk of angle closure glaucoma because their angle looks narrow.

Your doctor will not diagnose glaucoma unless your optic nerve shows evidence of damage. However, some people will be found to have elevated eye pressure but no evidence of optic nerve damage. In this case, you may be told that you are a “glaucoma suspect” or have “pre-glaucoma,” but do not yet have the disease. It is important to remember that not everyone with elevated pressures will develop glaucoma, and that not everyone with glaucoma has elevated eye pressures.

Treatment



Treatment of **Open Angle Glaucoma** usually begins with prescription eye drops. These medicines lower pressure inside the eye.

Treatment of **Closed Angle Glaucoma** usually begins with laser procedure. Laser procedure may not lower eye pressure to acceptable levels. You may need to start glaucoma eye drops after laser.

If both medication and laser surgery are unsuccessful, conventional eye surgery may be necessary to make a new opening for fluid to leave the eye. Eye surgeons perform this procedure in the operating room. Intravenous medication is given to help you relax. Numbing medication is applied on and around the eye. The surgeon creates a new opening to improve fluid drainage from the eye.

With both types of glaucoma surgery, eye pressure almost always decreases. But the pressure might not be low enough. You may need repeat surgery and/or need to continue long term use of glaucoma eye drops.

How do I use my eye drops?

1. Wash your hands.
2. Tilt your head back and look at the ceiling.
3. Using your index finger, gently pull down your lower eyelid to form a pocket.



4. Gently squeeze 1 drop into the pocket. Do not let the bottle tip touch your eye, your fingers, or any other surface.



5. Gently close your eye for about 2 minutes. This helps keep your medication in contact with your eye and prevents absorption into the bloodstream.



Photographs courtesy of Allergan.