

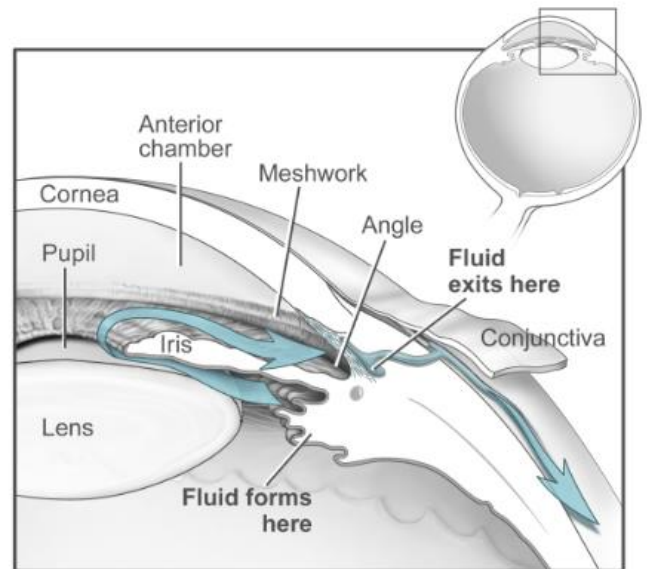
Understanding Glaucoma



What Is Glaucoma?

Your eyes are like small, delicate machines that depend on proper pressure, healthy nerves, and good circulation to work well. Glaucoma is a group of eye diseases that damage the optic nerve—the part of your eye that sends visual information to your brain.

Because the optic nerve is essential for sight, **damage from glaucoma can lead to permanent vision loss if not treated.** The good news is that early detection and regular eye exams can help protect your vision.



Understanding Eye Pressure

Inside your eye, there's a clear fluid called the **aqueous humor**. This fluid nourishes the eye and helps it keep its shape. It constantly flows within the eye and drains out through tiny channels. When these drainage pathways become partly blocked or don't work properly, the fluid builds up inside the eye. This increases **intraocular pressure (IOP)**—the pressure within the eye.

Over time, high pressure can damage the optic nerve fibers, leading to vision loss. However, some people can develop glaucoma even with normal eye pressure, depending on the health of their optic nerves and blood flow to the eye.

Types of Glaucoma

There are several kinds of glaucoma, but the two most common are:

1. Open-Angle Glaucoma

This is the most common type. The drainage angle in the eye remains open, but the tiny drainage channels gradually become less efficient. Pressure builds slowly over time, and you might not notice any symptoms until vision loss has already begun.

Because it develops silently, it's often called the 'silent thief of sight.'

2. Angle-Closure Glaucoma

This type happens when the drainage angle becomes suddenly blocked, causing a rapid rise in eye pressure. It's a medical emergency that requires immediate treatment.

Symptoms may include:

- Severe eye pain
- Blurred vision
- Halos around lights
- Nausea and vomiting
- Redness of the eye



If these symptoms occur, seek emergency eye care immediately.

Who Is at Risk?

Anyone can develop glaucoma, but certain factors increase your risk:

- **Age:** More common after age 40
- **Family history:** Glaucoma can run in families
- **Ethnicity:** People of African, Asian, or Hispanic background have higher risk
- **High eye pressure**
- **Eye injuries**
- **Medical conditions** such as diabetes or high blood pressure
- **Long-term use of steroid medications**

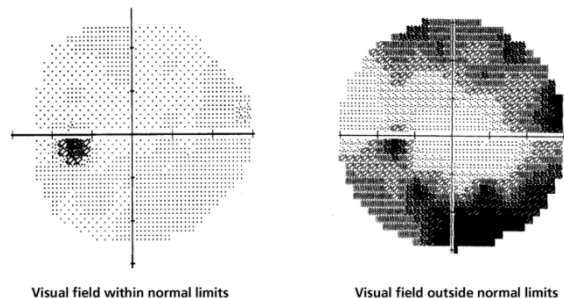
If you have one or more of these risk factors, regular eye exams are especially important.

Symptoms and Vision Changes

In the early stages, glaucoma usually has no symptoms. Vision often stays clear until significant damage has occurred.

As the disease progresses, you might notice:

- Gradual loss of side (peripheral) vision
- Trouble seeing in dim light
- Difficulty adjusting to darkness



Test results from a normal visual field without vision loss (left) and a visual field with vision loss from glaucoma (right). Darker gray and black areas represent loss of vision in a visual field. The optic disc appears black in both fields since there is no vision there; this is normal.

If untreated, glaucoma can eventually lead to tunnel vision and then total blindness. The damage is permanent, but treatment can stop or slow further loss.

How Is Glaucoma Diagnosed?

A comprehensive eye exam is the only way to detect glaucoma early.

Your eye doctor may:

- Measure your eye pressure
- Examine your optic nerve for signs of damage
- Test your side vision (visual field test)
- Measure corneal thickness
- Use optical scans to monitor nerve health over time



These painless tests can identify glaucoma before you notice any vision changes.

Treatment Options

Although glaucoma cannot be cured, it can be effectively managed. Treatment aims to lower eye pressure and prevent further optic nerve damage.

Common treatments include:

Prescription eye drops – These are the most common treatment. They reduce fluid production or help it drain more effectively.

Oral medications – Sometimes used along with drops to lower pressure.

Laser treatment – A quick, painless procedure that improves fluid drainage.

Surgery – In advanced cases, surgery may be needed to create a new drainage channel for the fluid.

Regular follow-up visits are essential to ensure that treatment is working and your eye pressure stays in a safe range.

Living with Glaucoma

With early diagnosis and consistent treatment, most people with glaucoma keep good vision for life.

To protect your eyes:

Take your eye drops as prescribed—every dose matters.

Attend all follow-up appointments.

Tell your eye doctor if you notice changes in your vision.

Encourage family members to get regular eye exams, since glaucoma can run in families.



In Summary

Glaucoma is a silent but serious eye disease that damages the optic nerve and can cause vision loss if not detected early.

- Because it often develops without symptoms, regular eye exams are the best way to protect your sight.
- With prompt treatment and ongoing care, you can manage glaucoma successfully and keep your vision clear for years to come.