

Glaucoma refers to a group of diseases—open-angle, angle-closure, low-tension or normal-tension, congenital and secondary glaucoma—where cells and fibers of the optic nerve are damaged, affecting the transmission of signals from the eye to the brain. It is usually progressive. At first there are no detectable symptoms. The brain can compensate for some visual field loss, so you may not be aware of blind areas. Eventually, vision narrows. Glaucoma can lead to blindness, but seldom does when diagnosed and treated early.

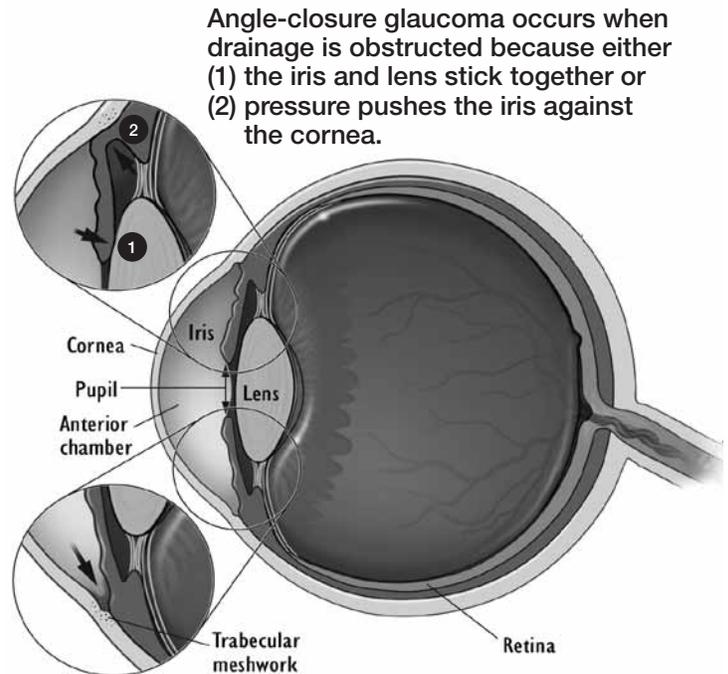
You should schedule regular, annual examinations with your eye care specialist, and do so without delay if you are experiencing loss of peripheral vision.

Until recently, scientists believed that damage from glaucoma was solely due to increased intraocular pressure (IOP). Medications and conventional or laser surgeries are typically prescribed to reduce the fluid build-up. Now, we know that high IOP does not always cause glaucoma and it can even occur when IOP is normal.

The information in this fact sheet is based on studies supported by Research to Prevent Blindness (RPB).

Important Vision Saving News

- One in five cases of glaucoma occurs in a person with normal intraocular pressure.
- Hypothyroidism (under active thyroid) poses a risk for developing open-angle glaucoma.
- Lowering fluid pressure in the eye may, at least partially, restore health to damaged regions.
- Thickness of a patient’s cornea may be related to glaucoma onset.



Angle-closure glaucoma occurs when drainage is obstructed because either (1) the iris and lens stick together or (2) pressure pushes the iris against the cornea.

In open-angle glaucoma, excess fluid typically builds up because of a blockage of drainage filtering tissue called the trabecular meshwork.

The eye is filled with nutrient-rich fluid, called aqueous humor. Normal intraocular pressure (IOP) is maintained through a balance between the fluid produced inside the eye and the amount drained. Researchers are developing treatments to help maintain the drainage capacity of filtering tissues.

Glaucoma poses an enormous public health problem. The government estimates that 2.2 million Americans have been diagnosed with glaucoma. Experts believe that nearly 2 million more may have the disease and not know it.

Recent Strides by Researchers

- New tools designed for earlier detection of changes in the retina and optic nerve
- Glaucoma-causing gene mutations found and gene therapies researched
- Innovative pharmacological and surgical treatments advanced
- Genetically engineered antioxidant protein shown to slow glaucoma