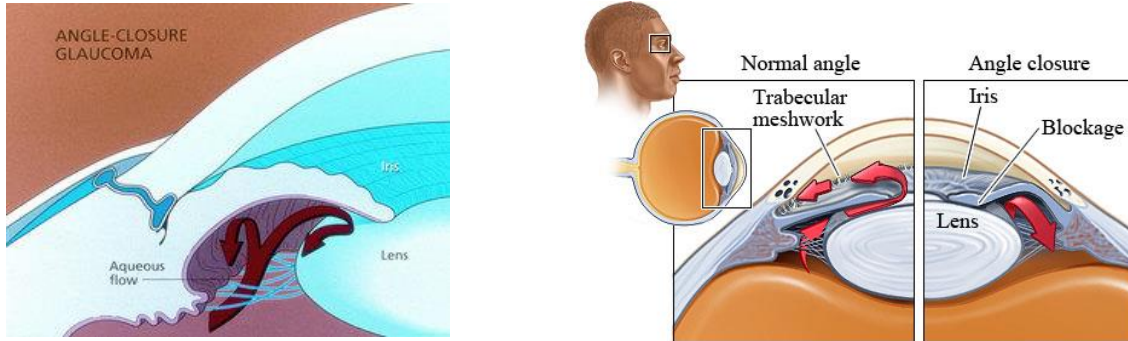


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Angle-Closure Glaucoma



This type of glaucoma is also known as Acute Glaucoma or Narrow Angle Glaucoma. It is much more rare and is very different from open-angle glaucoma in that the eye pressure usually rises very quickly.

This happens when the drainage angle of the eye, where the trabecular meshwork allows outflow of fluids get blocked like a sink with something covering the drain.

With angle-closure glaucoma, the iris is not as wide and open as it should be. The outer edge of the iris bunches up over the drainage canals, when the pupil enlarges too much or too quickly. This can happen when entering a dark room.

When internal eye structures are blocked in this way, your eye's internal pressure (intraocular pressure or IOP) may spike and possibly damage the optic nerve that transmits images from the eye to the brain. These signs may last for hours or until the IOP is reduced. With each narrow-angle glaucoma attack, part of your peripheral vision may be lost.

A simple test can be used to see if your angle is normal and wide or abnormal and narrow.

Symptoms of angle-closure glaucoma may include headaches, eye pain, nausea, rainbows around lights at night, and very blurred vision.

Acute angle-closure glaucoma is a medical emergency. If the high eye pressure is not reduced within hours, it can cause permanent vision loss. Anyone who experiences these symptoms should contact an Ophthalmologist immediately or go to a hospital emergency room.

Some chronic forms of narrow-angle glaucoma, however, can progress very slowly and cause eye damage without any obvious symptoms or pain in early stages.

Causes of Narrow-Angle Glaucoma

- **Pupillary block** - Eye fluid known as the aqueous humor is produced in the ciliary body, which is located behind the iris. Normally, the aqueous flows easily through the pupil into the front or anterior chamber of the eye.

But if the back of the iris adheres to the lens inside the eye, this pupillary channel becomes blocked. Then fluid backs up behind the iris, pushing the iris forward until it closes the drainage angle in the anterior chamber.

- **Iris plateau** - In this condition, the iris is attached to the ciliary body too close to the trabecular meshwork, where drainage occurs. When the pupil dilates, the peripheral iris tissue bunches up in the drainage angle and can cover up the trabecular meshwork, causing IOP to rise quickly.

This type of narrow-angle glaucoma attack can occur in conditions when the pupil dilates in dim lighting or when eye drops are used to intentionally enlarge the pupil during an eye exam.

- **Hyperopia** - People who are farsighted are more likely to have eyes with shallow anterior chambers and narrow angles, increasing their risk for angle-closure glaucoma from pupil dilation or aging changes in the eye.
- **Tumors and other causes** - A tumor behind the iris, swelling associated with inflammation of the ciliary body (intermediate uveitis) and alteration of the shape of the eye after surgery for a detached retina also can cause angle-closure glaucoma.

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Risk Factors for Narrow-Angle Glaucoma

In addition to hyperopia, risk factors for acute angle-closure glaucoma include:

- **Age** - As we grow older, the lens inside our eyes gets larger, increasing the risk for pupil block. Also, the anterior chamber tends to become increasingly shallow, and the drainage angle may narrow as we age.
- **Race** - Asians, as well as Inuits and other northern indigenous people, who have anatomically narrower anterior chamber angles than whites, have a higher incidence of angle-closure glaucoma.
- **Sex** - Among Caucasians, angle-closure glaucoma occurs three times more frequently in women than in men. Among African-Americans, men and women appear to be affected equally.

Treatment

Treatment of angle-closure glaucoma usually involves either laser or conventional surgery to remove a small portion of the bunched-up outer edge of the iris. Surgery helps unblock the drainage canals so that the extra fluid can drain.

If you have angle-closure glaucoma in one eye, doctors may go ahead and treat the other eye as a safety measure.

In general, surgery for angle-closure glaucoma is successful and long lasting. Regular checkups are still important though, because a chronic form of glaucoma could still occur.