

# GLAUCOMA

## Definition

Glaucoma is not just one eye disease, but a group of eye conditions resulting in optic nerve damage, which may cause loss of vision. Abnormally high pressure inside your eye (intra-ocular pressure), but not always, causes this damage.

Glaucoma is one of the leading causes of blindness in South Africa. Glaucoma can damage your vision so gradually you may not notice any loss of vision until the disease is at an advanced stage. The most common type of glaucoma, primary open-angle glaucoma, has no noticeable signs or symptoms except gradual vision loss.

Early diagnosis and treatment can minimize or prevent optic nerve damage and limit glaucoma-related vision loss. It's important to get your eyes examined regularly, and make sure your eye doctor measures your intra-ocular pressure.

## Symptoms

The most common types of glaucoma — primary open-angle glaucoma and angle-closure glaucoma — have completely different symptoms.

Primary open-angle glaucoma signs and symptoms include:

- Muscle weakness and fatigue
- Gradual loss of peripheral vision, usually in both eyes
- Tunnel vision in the advanced stages

Acute angle-closure glaucoma signs and symptoms include:

- Eye pain
- Blurred vision
- Nausea and vomiting (accompanying the severe eye pain)
- Halos around lights
- Sudden onset of visual disturbance, often in low light
- Reddening of the eye

Both open-angle and angle-closure glaucoma can be primary or secondary conditions. They're called primary when the cause is unknown and secondary when the condition can be traced to a known cause, such as eye injury, medications, certain eye conditions, inflammation, tumor, advanced cataract or diabetes. In secondary glaucoma, the signs and symptoms can include those of the primary condition as well as typical glaucoma symptoms.

## When to see a doctor

Don't wait for noticeable eye problems. Primary open-angle glaucoma gives few warning signs until permanent damage has already occurred. Regular eye exams are the key to detecting glaucoma early enough to successfully treat your condition and prevent further progression of your condition.

Regular eye testing is the only way to detect glaucoma before it causes damage to sight.

- If you are over 40, you should have your eyes tested every two years, over 60 every year.
- If someone in your family has got glaucoma, you should have your eyes tested regularly. This is especially important if the affected relative was under 40 years of age when the glaucoma was first discovered.

You should go to an optometrist to have your eyes tested. Arrangements may then be made for you to visit an eye specialist or an eye clinic. For a general examination - referral to a Physician or GP to exclude systemic diseases such as diabetes and hypertension and evaluate for neurological disorders.

Diagnosis in children may require examination under anesthesia in theatre.

In addition, be aware that a severe headache or pain in your eye, nausea, blurred vision, or halos around lights may be the symptoms of an acute angle-closure glaucoma attack. If you experience some or several of these symptoms together, seek immediate care at an emergency room or at an eye doctor's (ophthalmologist's) office right away.

## Causes

For reasons that doctors don't fully understand, increased pressure within the eye (intra-ocular pressure) is usually, but not always, associated with the optic nerve damage that characterizes glaucoma. This pressure is due to a buildup of a fluid (aqueous humor) that flows in and out of your eye.

This fluid normally exits your eye through a drainage system at the angle where the iris and the cornea meet. When the drainage system doesn't work properly, the fluid can't filter out of the eye at its normal rate, and pressure builds within your eye.

### Primary open-angle glaucoma

In primary open-angle glaucoma, the drainage angle formed by the cornea and the iris remains open, but the drainage channels (trabecular meshwork) in the angle are partially blocked, causing the fluid to drain out of the eye too slowly.

This causes fluid to back up in your eye, and pressure gradually increases within your eye.

Damage to the optic nerve doesn't cause symptoms or pain, and it happens so slowly that you may lose an extensive amount of vision before you're even aware of a problem. The exact cause of primary open-angle glaucoma remains unknown.

### ***Angle-closure glaucoma***

Angle-closure glaucoma, also called closed-angle glaucoma, occurs when the iris bulges forward to narrow or block the drainage angle formed by the cornea and the iris. As a result, fluid can't adequately flow through and exit your eye, and your eye pressure may increase abruptly. Angle-closure glaucoma usually occurs suddenly (acute angle-closure glaucoma), but it can also occur gradually (chronic angle-closure glaucoma).

Some people with an abnormally narrow drainage angle may be at risk of developing angle-closure glaucoma.

If you have a narrow drainage angle, sudden dilation of your pupils may trigger acute angle-closure glaucoma.

### ***Normal-tension glaucoma***

In normal-tension glaucoma, your optic nerve becomes damaged. However, your eye pressure remains within the normal range. Doctors don't understand why this occurs. You may have a sensitive optic nerve, or you may have less blood being supplied to your optic nerve. This lack

of blood supply could be caused by atherosclerosis — an accumulation of fatty deposits (plaques) in the arteries — or another condition limiting your blood circulation.

### ***Developmental glaucoma***

Some infants or children may be diagnosed with glaucoma. Rarely, some children may be born with glaucoma (congenital glaucoma), develop glaucoma in the first few years of life (infantile glaucoma) or develop glaucoma after age 4 or 5 (juvenile glaucoma). Children usually won't have any symptoms. However, they have optic nerve damage, which may be caused by angle blockages or malformations (primary infantile glaucoma), or it could develop as the result of other conditions (secondary glaucoma).

### ***Pigmentary glaucoma***

In pigmentary glaucoma, pigment granules from your iris build up in the drainage channels (trabecular meshwork), slowing or blocking fluid exiting your eye. Physical activities, such as jogging, sometimes stir up the pigment granules, depositing them on the trabecular meshwork and causing intermittent pressure elevations.

## **Risk factors**

Because chronic forms of glaucoma can destroy vision before any signs or symptoms are apparent, be aware of these factors:

- **Elevated internal eye pressure (intra-ocular pressure):** If your internal eye pressure (intra-ocular pressure) is higher than normal, you're at increased risk of developing glaucoma, though not everyone with elevated intra-ocular pressure develops the disease.
- **Age:** You're at a higher risk of glaucoma if you're older than age 60. You may be at higher risk of angle-closure glaucoma if you're older than age 40.
- **Ethnic background:** more common and more severe in persons of African origin.
- **Family history of glaucoma:** If you have a family history of glaucoma, you have a greater risk of developing it.

Glaucoma may have a genetic link, meaning there's a defect in one or more genes that may cause certain individuals to be more susceptible to the disease. A form of juvenile open-angle glaucoma has been clearly linked to genetic abnormalities.

- **Medical conditions:** Several conditions may increase your risk of developing glaucoma, including migraines, diabetes, heart diseases, high blood pressure and hypothyroidism.
- **Other eye conditions:** Severe eye injuries can cause increased eye pressure. Other eye conditions that could cause increased risk of glaucoma include eye tumors, retinal detachment, eye inflammation and lens dislocation. Certain types of eye surgery also may trigger glaucoma. Also, being nearsighted or farsighted may increase your risk of developing glaucoma.
- **Long-term corticosteroid use:** Using corticosteroid medications, especially eye drops for a long period of time may increase your risk of developing glaucoma.

## **Complications**

Because chronic forms of glaucoma can destroy vision before any signs or symptoms are apparent, be aware of these factors:

- Blind spots in your peripheral vision
- Tunnel vision
- Total blindness

## Lifestyle and home remedies

If you have elevated intra-ocular pressure or glaucoma, follow these lifestyle tips.

- **Eat a healthy diet:** Eating a healthy diet can help you maintain your health, but it won't prevent glaucoma from worsening. Several vitamins and nutrients can help improve your vision.
- **Exercise safely:** Regular exercise may reduce eye pressure in open-angle glaucoma. Talk to your doctor about an appropriate exercise program.
- **Limit your caffeine:** Drinking high amounts of caffeine may increase your eye pressure.
- **Sip fluids frequently:** Drink only moderate amounts of fluids at any given time during a day. Drinking a quart or more of any liquid within a short time may temporarily increase eye pressure.

### Alternative medicine

Some types of alternative medicine may help your overall health, but these won't treat or prevent glaucoma.

Some forms of alternative medicine that some people may participate in or use include:

- **Herbal remedies:** Don't depend on herbal remedies for the primary care of glaucoma. Several herbal supplements, such as bilberry, are advertised as glaucoma remedies, but have not been proved effective in preventing or treating glaucoma.

Herbal supplements should never be used in place of proven therapies, and you should always discuss them with your doctor before trying them.

- **Relaxation techniques:** Stress may trigger an attack of acute angle-closure glaucoma. If you're at risk of this condition, find healthy ways to cope with stress. Several techniques, such as meditation and biofeedback, can help reduce your stress.

## Coping and support

Because glaucoma has no cure, a diagnosis generally means lifelong treatment and regular checkups.

Meeting and talking to other people with glaucoma can be very helpful, and many support groups exist. Check with hospitals and eye care centers in your area to find local groups and meeting times. Several online resources, including support groups, are available.

## Prevention

- **Get regular eye care.** Regular comprehensive eye exams can help detect glaucoma in its early stages before irreversible damage occurs. As a rule, have comprehensive eye exams every three to five years after age 40 and every year after age 60. You may need more frequent screening if you have glaucoma risk factors. Ask your doctor to recommend the right screening schedule for you.
- **Treat elevated eye pressure.** Glaucoma eye drops can significantly reduce the risk that elevated eye pressure will progress to glaucoma. To be effective, these drops must be taken regularly even if you have no symptoms.
- **Eat a healthy diet.** While eating a healthy diet won't prevent glaucoma, it can improve your physical and mental health. It can also help you maintain a healthy weight and control your blood pressure.
- **Wear eye protection.** Serious eye injuries can lead to glaucoma. Wear eye protection when you use power tools or play high-speed racket sports on enclosed courts. Also wear hats and sunglasses if you spend time outside.

*Source: The Mayo Clinic*

## Contact us

Please feel free to contact your Aon Healthcare Consultant if you have any concerns. You may also contact the **Aon Resolution Centre on 0860 835 272 or e-mail: [arc@aon.co.za](mailto:arc@aon.co.za)** for further information.

We focus on communication and engagement, across insurance retirement and health, to advise and deliver solutions that create great client impact. We partner with our clients and seek solutions for their most important people and HR challenges.

We have an established presence on social media to engage with our audiences on all matters related to risk and people.

For more information from **Aon Employee Benefits** on healthcare, retirement benefits and a wide range of topics feel free to go to **[www.aon.co.za](http://www.aon.co.za)** or follow us on:



*The information contained in this clinical awareness communication is for educational purposes only, and is not intended a medical advice, diagnosis or treatment. If you are experiencing symptoms or need health advice, please consult a healthcare professional.*