

What is glaucoma?

Glaucoma is an eye disease that causes vision loss if left untreated.

Glaucoma happens when fluid inside the eye does not drain properly. This increases pressure in the eye, called the intraocular pressure (IOP). The increased pressure can damage eyesight.

You can't feel high IOP, but it can be measured easily by an eye doctor during an eye exam. If the pressure is high, more tests are done to diagnose glaucoma and decide on treatment.

Vision is lost from the outside edges of the visual field (the peripheral vision). There is no pain, and vision loss isn't noticeable at first. That's why it is important to catch and treat glaucoma early. Once lost, vision cannot be restored.

The best way to protect yourself is to get your eyes tested. The tests are quick and painless.

Vision Loss with Glaucoma



NORMAL VISION



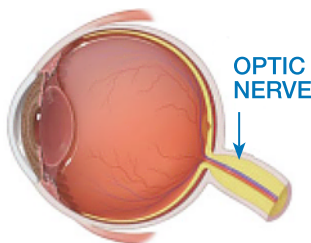
MILD TO MODERATE GLAUCOMA



SEVERE GLAUCOMA

Glaucoma is one of the most common causes of blindness, affecting 1 in 100 Canadians over age 40.

Glaucoma is a leading cause of blindness. Vision is lost from the outside edges of the visual field (the peripheral vision).



The optic nerve sends signals about what the eye sees to the brain. High eye pressure can damage the optic nerve.

Glaucoma can happen in two basic ways:

Open-angle glaucoma happens when fluid inside the eye passes too slowly through the “exit” from the eye. Pressure inside the eye slowly rises and can damage the optic nerve. This form of glaucoma is the most common form. It happens slowly and painlessly. Often, much vision is lost before it is noticed.

Closed-Angle Glaucoma happens when the “exit” for the fluid inside the eye becomes blocked. If this happens, eye pressure can rise rapidly and even cause pain. The high pressure can quickly damage the optic nerve. This form of glaucoma is a medical emergency.

How common is glaucoma?

Glaucoma is more common than you might think:

- Glaucoma affects **250,000** Canadians.
- Glaucoma is the **second most common cause of vision loss** in Canadians over age 65.
- **One in 100** Canadians over age 40 has glaucoma.
- **About half of the people who have glaucoma don't even know it.**

Think you are too young for glaucoma? Glaucoma can happen to anyone, at any age. The risk increases with age, but even babies can have glaucoma.

Who gets glaucoma?

Anyone can get glaucoma, but you are more likely to get it if you have certain risk factors associated with the condition.

1. **Age is a factor.** As you grow older, especially after age 40, you are more likely to get glaucoma.
2. **Other medical conditions** can also increase your risk for glaucoma, such as near-sightedness, high blood pressure, conditions being treated with steroids, as well as previous eye injuries or surgery.
3. **High eye pressure, or high IOP,** is the risk factor you can change. Your eye specialist can tell you if your eye pressure is high and damaging your optic nerve. Although damage cannot be reversed, studies show that lowering eye pressure may slow the risk of progression to glaucoma. High eye pressure can be easily treated.
4. Like many other medical conditions, **glaucoma tends to run in families.** If someone in your immediate family like a parent or sibling has glaucoma, you are at increased risk. However, if one of your family members has it, you will not automatically develop it too.
5. People of **African descent have a 6–8 times higher risk** than other people to develop glaucoma. It is also 15 times more likely to cause blindness in those of African descent between the ages of 45–64 than in Caucasians of the same age group.
6. People of **Inuit, Asian, or Hispanic descent have a greater risk** than other people to develop glaucoma.

Can I prevent glaucoma?

The best way to protect yourself from glaucoma is to get your eyes tested. If your eye pressure is high, your eye doctor can help control it. The tests are quick and painless.

How often should I have my eyes checked?

If you have no glaucoma risk factors, follow your eye doctor's recommended schedule for exams, or refer to the chart below. People with glaucoma risk factors will need to have their eyes checked more often.

Recommended Eye Exam Frequency:

	Age	Recommended Eye Exam Frequency
Infants and toddlers	Birth to 24 months	By age 6 months
Preschool	2 to 5 years	At age 3, and prior to entering elementary school
School age	6 to 19 years	Annually
Adult	20 to 64 years	Every one to two years
Older adult	65 years and older	Annually

Adapted from the Canadian Association of Optometrists

What are the symptoms of glaucoma?

Open-angle glaucoma and a **chronic (long-term) form of closed-angle glaucoma** begin without any symptoms. There is no pain. Vision loss happens at the outside edges of the visual field, so it is not noticed at first. But left untreated, the visual field becomes smaller and smaller. Eventually, tunnel vision results, progressing to complete blindness.

Acute closed-angle glaucoma starts suddenly and does have symptoms. This type of glaucoma needs immediate medical attention. Symptoms can include:

- Pain in the eyes
- Blurred vision
- Redness in the eye
- Headaches (especially in dim light)
- Nausea
- Haloes around lights

The most common form of glaucoma starts with **no symptoms**.

If you have these symptoms, see your eye doctor or go to a hospital emergency room right away.

How is glaucoma diagnosed?

Because glaucoma often starts without any noticeable symptoms, it is important to **have your eyes checked regularly**. The increased eye pressure cannot be felt. Vision loss is not obvious because it starts from the outside of the visual field—the peripheral vision.

Tests for glaucoma are quick and painless.

When you have an eye exam, your eye doctor will check your **vision** to see how well you see distances, and at the sides (the peripheral vision).

Your doctor might use special drops to dilate (widen) your pupils so that he or she can check your **retina** and **optic nerve**. These drops will make your vision blurry for the next few hours so it is important to have someone help you home.

The doctor measures your **eye pressure** with a device called a **tonometer**.

Depending on the results, you may need more tests, and eventually treatment.

Can glaucoma be treated?

Yes. Early diagnosis and treatment are important to help stop glaucoma from progressing. That's why it is important to keep regular eye exams.

Glaucoma treatments include **medicines**, **laser surgery**, and **surgery**. Lost sight cannot be restored, but treatment can help preserve any remaining vision.

Medicines

Eyedrops or pills are the most common treatment for glaucoma. Medicines help lower eye pressure, either by helping the eye make less fluid, or by helping the fluid drain from the eye.

Before beginning any glaucoma treatment, be sure to tell your eye doctor about any medicines you are already taking.

Remember that if your doctor has prescribed a glaucoma medicine, it is important to take the medicine exactly as prescribed. You can't feel eye pressure, so it can be easy to forget. Keeping a tracker or calendar at hand can help you keep track of your treatment.

Laser surgery

Laser surgery can be used to help fluid drain from the eye. Your eye doctor will suggest laser surgery if they feel medicines will not be enough to control your eye pressure.

Laser surgery can be performed in your doctor's office or eye clinic. Your doctor will numb your eye with eyedrops before the surgery. Laser surgery uses a high-intensity beam of light to help open the passageway where fluid leaves the eye.

During the procedure, you may see flashes of bright green or red light.

Your doctor will give you instructions about what medicines to take or stop taking, before and after the surgery. Be sure to keep your follow-up visits with your eye doctor.

Surgery

Your doctor might choose conventional surgery to open the passageway where fluid leaves the eye. Your doctor might suggest conventional surgery if medicines and laser surgery are not controlling your eye pressure.

The surgery is performed in an eye clinic or hospital. Your doctor will give you a medicine before the surgery to help you relax, and will make small injections around the eye to numb it.

Surgery removes tissue to create an opening for fluid to drain from the eye.

Your doctor will give you instructions about what medicines to take or stop taking, before and after the surgery. Be sure to keep your follow-up visits with your eye doctor.

I have been diagnosed with glaucoma. What do I need to know?

Glaucoma is a **lifelong** condition, requiring lifelong care. Usually in glaucoma, there is an increase in pressure within the eye. Treatments are available to control eye pressure. Left untreated, glaucoma leads to vision loss.

If you or someone in your care is diagnosed with glaucoma, there are medicines available to help lower the pressure in the eye.

It is important to start treatment early and **stick with it**, as your doctor prescribes. **Lost vision cannot be restored.**

If you have no symptoms, you may be tempted to skip your medication. But remember that controlling your eye pressure is the best way you can help stop glaucoma from becoming worse.

If you are being treated for glaucoma, be sure to schedule and keep regular appointments with your eye doctor so that together you can monitor your condition. **Staying consistent with therapy over time** is the best way to help manage and stay in control of your condition.

Be sure you understand the directions your doctor gives you. Glaucoma is a lifelong condition. It is important to be consistent with your treatment.

If eye drops do not control your IOP, you may need laser therapy. A small number of people may need surgery.

Remember: even if you're feeling great and seeing well, you must still take your medication **exactly as your doctor prescribed!**

What do I need to know if I am caring for someone with glaucoma?

Congratulations! You are already on the right track. If you have glaucoma, or are caring for someone with glaucoma, you've already taken an important step by visiting this website to help **inform yourself** about glaucoma. The more you learn about glaucoma, the better prepared you will be to help control it.

If you, or the person you care for, have been prescribed glaucoma eye drops or medication, try to establish a **regular schedule** to keep taking the medication exactly as the eye doctor prescribed. For example, if taking daily eye drops, try putting them in at the same time every day. Soon, it will be a daily habit—just like brushing your teeth.

Keep track of medications with a **journal or tracker** so that you can easily recall whether you have put eye drops in or taken the medication. Keep the tracker somewhere where it is easy to refer to—like the front of the fridge or a bedside table.

If you find it difficult to place eye drops in the eyes, talk to the eye doctor. He or she can demonstrate the best technique. Also, a **special device** exists that can help make putting in eye drops easier. Many people, especially the elderly, have difficulty putting drops in their eyes. Helping them use the device the first few times can help them feel more comfortable putting in drops themselves.

Schedule and keep **regular appointments** with the eye doctor, listen carefully, and don't be afraid to ask questions.

Stay actively involved in your eye care, or the eye care of the person you help. Over time, your **positive attitude and commitment** can make a big difference in sticking with therapy.

Remember: It is important to stay on your treatment and remember to follow your therapy as prescribed to help

lower your IOP. You are a partner in your treatment: working together, you and your eye doctor can help manage your IOP.

Patient Resources

What resources do I have?

Patient Associations

Glaucoma Patient Associations

If you have glaucoma, you are not alone. A number of organizations exist to support people who have glaucoma:

Glaucoma Research Society of Canada	www.glaucotaresearch.ca
Pediatric Glaucoma and Cataract Family Association	www.pgcf.org
International Glaucoma Association	www.glaucoma-association.com
World Glaucoma Association	www.worldglaucoma.org
World Glaucoma Patient Association	www.worldgpa.org

Other Websites

The more you learn about glaucoma, the better prepared you will be to manage it. To learn more about glaucoma, visit:

Canadian National Institute for the Blind	www.cnib.com
Canadian Ophthalmological Society	www.eyesite.ca
Canadian Association of Optometrists	www.opto.ca
Canadian Glaucoma Society	www.eyesite.ca/cgs
Glaucoma Research Society of Canada	www.glaucotaresearch.ca

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