ISLAND EYE CARE
MEDICAL & SURGICAL EYE CARE

What is Glaucoma?

Glaucoma is a group of diseases that damage the eye's optic nerve and can result in vision loss and blindness. However, with early detection and treatment, you can often protect your eyes against serious vision loss.

How does the optic nerve get damaged by open-angle glaucoma?

Several large studies have shown that eye pressure is a major risk factor for optic nerve damage. In the front of the eye is a space called the anterior chamber. A clear fluid flows continuously in and out of the chamber and nourishes nearby tissues. The fluid flows out through a spongy (trabecular) meshwork, and leaves the eye, like a drain with a screen.

In open-angle glaucoma, the most common form of glaucoma, even though the drain is "open" the fluid passes too slowly through the meshwork drain. When the fluid builds up, the pressure inside the eye rises to a level that may damage the optic nerve. When the optic nerve is damaged from increased pressure, vision loss may result. You cannot feel high pressure or "see" optic nerve damage until very late in the disease. That's why controlling pressure inside the eye is important.

Will I develop glaucoma if I have increased eye pressure?

Not every person with increased eye pressure will develop glaucoma. Some people can tolerate higher levels of eye pressure better than others. Still others may have "normal" eye pressure and still suffer nerve damage. A certain level of eye pressure may be high for one person but normal for another. Whether you develop glaucoma depends on the level of pressure your optic nerve can tolerate without being damaged. This level is different for each person, which is why a comprehensive dilated eye exam is very important. At these exams your doctor can monitor your pressure and optic nerve appearance.

Can I develop glaucoma without an increase in my eye pressure?

Yes. Glaucoma can develop without increased eye pressure. This form of glaucoma is called low-tension or normal-tension glaucoma. It is a type of open-angle glaucoma.

Who is at risk for open-angle glaucoma?

Anyone can develop glaucoma. Some people, listed below, are at higher risk than others:

- African Americans over age 40 (3 times the average risk)
- Everyone over age 60, especially Mexican Americans
- People with a family history of glaucoma

A comprehensive eye exam can reveal other risk factors, such as high eye pressure, thinness of the cornea, reduced peripheral vision, and abnormal optic nerve anatomy. In some people with certain combinations of these high-risk factors, medicines in the form of eyedrops reduce the risk of developing glaucoma by about half.

Glaucoma Symptoms

Early Open-angle Glaucoma has no symptoms. It causes no pain. Vision stays normal. Without treatment, people with glaucoma will slowly lose their peripheral (side) vision. As glaucoma remains untreated, people may miss objects to the side and out of the corner of their eye. They seem to be looking through a tunnel. Over time, straight-ahead (central) vision may

decrease until no vision remains. There is no cure for glaucoma. Vision lost from the disease cannot be restored.

What are some other forms of glaucoma and how are they treated?

Open-angle glaucoma is the most common form. Some people have other types of the disease.

In **low-tension** or **normal-tension glaucoma**, optic nerve damage and narrowed side vision occur in people with normal eye pressure. Lowering eye pressure at least 30 percent through medicines slows the disease in some people. Glaucoma may worsen in others despite low pressures.

A comprehensive medical history is important to identify other potential risk factors, such as low blood pressure or Obstructive Sleep Apnea (OSA), that contribute to low-tension glaucoma. If no risk factors are identified, the treatment options for low-tension glaucoma are the same as for open-angle glaucoma.

In **angle-closure glaucoma**, the fluid at the front of the eye cannot drain through the angle and leave the eye. The angle gets blocked by part of the iris. People with this type of glaucoma may have a sudden increase in eye pressure. Symptoms include severe pain and nausea, as well as redness of the eye and blurred vision. If you have these symptoms, you need to seek treatment immediately. **This is a medical emergency.** If your doctor is unavailable, go to the nearest hospital or clinic. Without treatment to restore the flow of fluid, the eye can become blind. Usually, prompt laser surgery and medicines can clear the blockage, lower eye pressure, and protect vision.

In **congenital glaucoma**, children are born with a defect in the angle of the eye that slows the normal drainage of fluid. These children usually have obvious symptoms, such as cloudy eyes, sensitivity to light, and excessive tearing.

What You Can Do

If you are being treated for glaucoma, be sure to take your glaucoma medicine every day. See your eye care professional regularly. Medicare covers eye exam for some people at high risk for glaucoma. These people include those with diabetes, those with a family history of glaucoma, and age 50 and older.

How should I use my glaucoma eyedrops?

If eyedrops have been prescribed for treating your glaucoma, you need to use them properly, as instructed by your eye care professional. Proper use of your glaucoma medication can improve the medicine's effectiveness and reduce your risk of side effects.

To properly apply your eyedrops, follow these steps:

- Wash your hands.
- Hold the bottle upside down.
- Tilt your head back.
- Hold the bottle in one hand and place it as close as possible to the eye.
- With the other hand, pull down your lower eyelid. This forms a pocket.
- Place the prescribed number of drops into the lower eyelid pocket. If you are using more than one eyedrop, be sure to wait at least 5 minutes before applying the second eyedrop.
- Close your eye OR press the lower lid lightly with your finger for at least 1 minute.