

## **GLAUCOMA**

### **WHAT IS GLAUCOMA?**

Glaucoma is an eye disease, which is one of the leading causes of blindness in Australia. Glaucoma is fairly common in adults over age 35. Three out of every 100 persons in this age group have vision threatened by this disease. When diagnosed early, blindness from glaucoma is almost always controllable with ongoing treatment.

When we look at an object, the picture is carried from the eye to the brain by the nerve of sight (the optic nerve). This nerve is like an electric cable. It contains many wires, each carrying a message, which join together to provide side vision, as well as sharp, central reading vision. When increased pressure within the eye causes damage to some of these "wires," blind areas in the field of vision will develop. This is typical of glaucoma. The patient seldom notices these peripheral blind areas until considerable damage has occurred. If the entire nerve is destroyed, blindness results. However, this rarely occurs when glaucoma is diagnosed before there is extensive damage to the nerve.

While many family doctors can test for glaucoma as part of your periodic medical visit, an ophthalmologist is the only medical doctor who is specifically trained to perform this examination and treat this condition. For this reason adults over the age of 35 should see an ophthalmologist for periodic medical eye examinations.

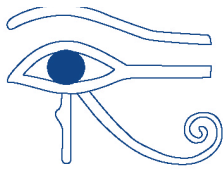
### **CAUSES AND SYMPTOMS**

A clear transparent liquid called the aqueous humor flows through the inside of the eye continuously. This inner flow can be compared to a sink with the tap turned on all the time. If the drainpipe gets clogged, water collects in the sink. If the drainage system of the eye gets similarly blocked, the fluid pressure within the inner eye is increased and can cause damage to the optic nerve.

Blockage of these "pipes" can occur in 3 ways:

The pipe may have been imperfectly manufactured. This type of defect is seen in congenital, childhood or juvenile glaucoma, where the drainage openings are malformed from birth. If pressure inside the eye of an infant is increased, the elasticity of the young tissues often causes the eye to enlarge and the front of the eye to become hazed, like fog on a windshield. The infant may be sensitive to light and the eyes often water excessively. This is a rare condition; however, such symptoms or any other suspicion of abnormality of the eyes or vision of a child or young adult should lead to an immediate visit to an ophthalmologist.

Debris and deposits can build up slowly within the "drainpipe". This partial blockage causes a gradual increase of pressure within the eye. This is known as chronic or primary open angle glaucoma because it develops slowly over a period of time. Most adult glaucoma patients have open-angle glaucoma.



# Bayside Eye Specialists

*Excellence in Eye Care*

Open-angle glaucoma is a thief in the night which steals vision so quietly that the patient is unaware of trouble until the optic nerve is badly damaged. This type of glaucoma is seldom accompanied by symptoms.

A sheet of tissue may float near the drain and suddenly drop over the opening, blocking all outflow. Eye pressure builds up rapidly. Such a sudden, complete blocking of fluid flowing out of the eye results in acute angle-closure glaucoma. Blurred vision, severe pain, coloured rings around lights, nausea and vomiting should bring the patient quickly to the doctor. Unless this condition is relieved promptly, blindness can result in a day or two.

Injuries, drugs, hemorrhages, tumours, inflammations and other conditions can also block outflow channels in the eye. This may increase eye pressure, which can result in a form of glaucoma known as secondary glaucoma.

## **DETECTION AND DIAGNOSIS**

Early diagnosis can be made by the ophthalmologist in the course of a periodic eye examination. During the painless examination the doctor will determine the pressure of the eye: This is only part of the examination. If indicated, the fields of vision will be tested for shrinkage or blind spots. Using an ophthalmoscope to view the back of the eye, the doctor will examine the optic nerve to be sure no damage is occurring.

Many factors increase the risk of damage, such as a history of glaucoma in the family, general health problems such as diabetes, migraine, arteriosclerosis, or anemia. The ophthalmologist must weigh all of these factors before deciding whether or not to start treatment.

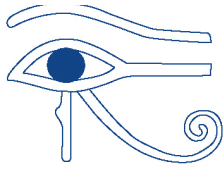
## **TREATMENT**

All types of glaucoma need periodic observation and treatment. Glaucoma is usually controlled by eye drops or pills in various combinations. The purpose of these is to decrease pressure by assisting outflow of fluid from the eye, or by decreasing the inflow of fluid.

However, sometimes, undesirable side effects may occur. Some eye drops may sting, redden the eye or cause blurring and occasional headaches. Such side effects usually disappear after a few weeks. Other drops may also affect your pulse, heartbeat and breathing. Pills sometimes cause tingling of fingers and toes, drowsiness, loss of appetite, bowel irregularities, and occasional kidney stone formation. They are usually prescribed only when absolutely necessary. Notify your ophthalmologist immediately if there is a question of possible side effects.

Control of glaucoma by drugs can only be effective if patients adhere to the treatment schedule as prescribed by the ophthalmologist. Medication should never be stopped without first contacting your





# Bayside Eye Specialists

*Excellence in Eye Care*

doctor. It is always important to inform all the medical practitioners you visit about the eye medications you are using.

If medications are poorly tolerated or ineffective in controlling pressure in chronic open-angle glaucoma, surgery or laser treatment may become necessary.

Its purpose is to form a new drainage canal in the eye. Angle-closure glaucoma is treated immediately with medications to lower the pressure, and then by surgery or laser treatment. Fortunately, serious complications are uncommon in modern glaucoma surgery and surgery may be the best alternative if optic nerve damage is occurring.

## **WHO CAN TREAT GLAUCOMA?**

Only an ophthalmologist can treat glaucoma. An ophthalmologist is a medical doctor who is educated, trained and registered to provide total care of the eyes, from performing comprehensive eye examinations to prescribing corrective lenses, diagnosing diseases and disorders of the eye, and carrying out the medical and surgical procedures necessary for their treatment.

If you are over age 35, you should have your eyes checked for glaucoma every 2 or 3 years. Your family doctor should be consulted whenever there is any decrease in vision or recurrent pain, or when any of the other symptoms discussed above are present. If necessary he will refer you to an ophthalmologist. When diagnosed promptly, eye pressure can be brought under control and future glaucoma attacks can be prevented.

