

## Glaucoma

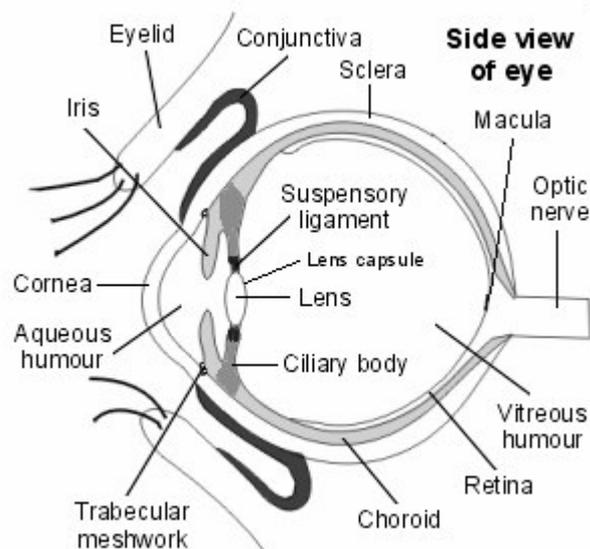
Glaucoma is the name given to a group of eye conditions which can cause sight loss and affects about 2 people in every hundred over the age of 40 with the risk increasing with age.

Glaucoma is usually a slow progressive disease which can affect sight quite seriously without being noticed often only identified when attending an optician for a routine eye examination.

If left untreated, glaucoma can cause blindness therefore early detection is vital.

There are 4 main types of glaucoma

- open angle glaucoma (chronic glaucoma)
- acute angle closure glaucoma (acute glaucoma)
- secondary glaucoma
- developmental glaucoma (congenital glaucoma)



**Diagram showing the structures of the eye**

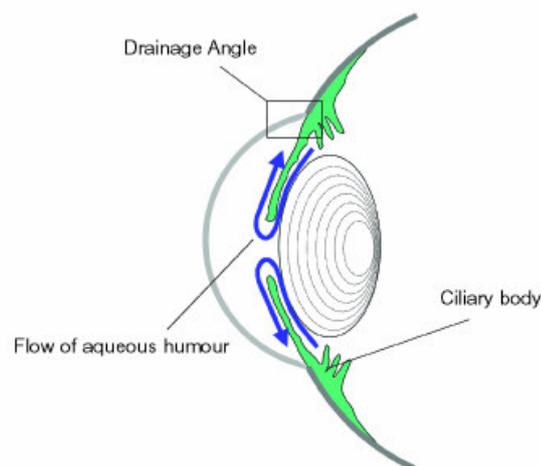
## What happens in glaucoma?

The fluid made within the eye (aqueous humour) nourishes the front of the eye, removes waste products and helps the eye maintain its shape.

There is a constant cycle of aqueous production and drainage but in glaucoma, the fluid is unable to drain into the blood stream effectively because the drainage tubes (trabecular meshwork) have been partially blocked leading to an increase in pressure (intra ocular pressure – IOP).

## Open angle glaucoma

This is the most common type of glaucoma which develops slowly and can go unnoticed for some time as there is no pain or obvious symptoms although sight may already be permanently lost.



**Diagram showing the flow of aqueous fluid from where it is produced in the ciliary body, through the pupil and out through the drainage angle.**

It is the increase in pressure which causes damage to the optic nerve (This nerve carries information from the retina,

the light sensitive layer of the eye to the brain where it is interpreted as sight).

If left untreated, permanent damage may occur leading to loss of sight. Eye drops are the usual course of treatment to help reduce the eye pressure although occasionally, if control is not obtained then laser and / or surgery may be considered.

When someone has been diagnosed with glaucoma, they will be required to attend follow up appointments once or twice a year to check that the prescribed drops are working adequately and sight is preserved and therefore should be considered as an important part of the treatment programme.

Glaucoma is monitored by measurement of the intraocular pressure, checking damage to the optic nerve head (optic disc) and monitoring of visual fields (peripheral vision).

If eye drops are prescribed, they are very important in the control of glaucoma and should be administered regularly as directed. They act by either slowing the production of aqueous or opening up the drainage channels. They should be considered to be a life long treatment and although will not restore lost vision, are vitally important in helping to prevent further loss of sight.

### **Acute Angle Closure Glaucoma**

Acute angle closure glaucoma (acute = sudden) is uncommon. It refers to a narrowing of the drainage angle which often happens quickly, causing a sudden and painful build-up of pressure in the eye. The eye becomes red and painful with headache, blurred vision, light

sensitivity and may be accompanied by nausea and vomiting.

This is a medical emergency which requires prompt treatment to prevent permanent sight loss.

### **Secondary glaucoma**

Secondary glaucoma may occur as a complication of other eye conditions such as an eye injury, previous surgery, diabetic eye disease, advanced cataracts, inflammation within the eye, tumour and some medications and may be open angle or closed angle. Treatment will depend on the underlying cause and may include medication or surgery.

### **Developmental glaucoma**

Developmental or Congenital glaucoma (congenital = born with) is rare but potentially serious. It is generally seen in infants and is present at birth or develops shortly after. Developmental glaucoma is caused by a malformation of the eye and in most cases, surgery is required.

### **Further Support or Information:**

The International Glaucoma Association (IGA) can provide further information at:

[http://www.glaucoma-association.com/nqcontent.cfm?a\\_id=176](http://www.glaucoma-association.com/nqcontent.cfm?a_id=176)