

Understanding glaucoma

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A guide about glaucoma

What is glaucoma?

Glaucoma is a name for a group of eye conditions that affect the optic nerve. This nerve carries information from the light sensitive part of the eye (the retina) to the brain where it is perceived as a picture.

What are the different types of glaucoma?

There are 4 main types:

- Open angle glaucoma
- Closed angle glaucoma
- Congenital glaucoma
- Secondary glaucoma (eg after eye trauma)

Open angle glaucoma is the commonest type. This type of glaucoma arises because the drainage channels within the eye become blocked over many years. Typically, the eye pressure rises very slowly, and visual field is gradually affected.

Acute glaucoma (acute = sudden) is less common in western countries. This occurs when there is a sudden and more complete blockage to the flow of aqueous fluid to the eye. This is because a narrow "angle" closes to prevent fluid ever getting to the drainage channels. This can be quite painful and may cause permanent damage to sight if not treated promptly.

When a rise in eye pressure is caused by another eye condition this is called secondary glaucoma. There is also a rare but potentially serious condition in babies called developmental or congenital glaucoma which is caused by malformation in the eye. This leaflet is about chronic and acute glaucoma.

What are the main risk factors?

- Age - 5% over the age of 75
- Race - African origin increases risk four fold compared to Caucasians
- Family History - people with close family history (father / mother / brother / sister) are entitled to a free NHS eye examination
- Short sight - people with high myopia are also entitled to a free NHS eye examination

How is glaucoma detected?

There are three main tests:

- Tonometry: checking the eye pressure
- Perimetry: checking the visual field
- Ophthalmoscopy: checking the optic nerve

Other instruments, such as the GDx nerve fibre layer analyser provide useful diagnostic information.

What are the treatments?

The main treatment aim to reduce eye pressure, and so prevent any further damage to the optic nerve. Eye drops taken once or twice a day are usually required if the pressure rises above a certain level. Occasionally an operation is required if drops are ineffective or not tolerated.