



Glaucoma
UK

glaucoma.uk

Primary Angle Closure Glaucoma



Glaucoma UK is a registered charity that is here for everyone living with glaucoma throughout the UK.

- We raise awareness of glaucoma so that it is detected and treated early.
- We campaign for effective services for everyone affected by glaucoma.
- We provide advice and support to help people live well with glaucoma.
- We fund vital glaucoma research.



Campaigning & Awareness

Fewer people go blind



Advice & Support

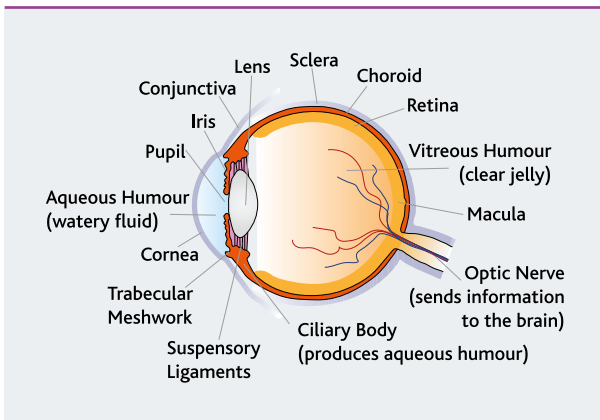
People with glaucoma live well and stay well



Research

Better diagnosis, care and treatment

What is glaucoma?

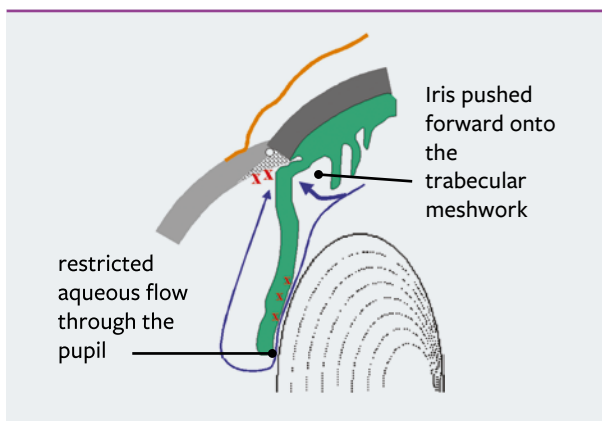


Glaucoma is the name of a group of eye diseases in which the optic nerve becomes damaged, usually as a result of increased pressure in the eye. The optic nerve sends visual information from the eye to the brain and if it is damaged, it can result in sight loss and even blindness.

The most common type of glaucoma (primary open angle glaucoma) starts very slowly and has no symptoms to begin with, so it is usually discovered during an eye health check by an optometrist. If glaucoma is detected early and treatment is started and continued, significant sight loss is unlikely. However, you cannot get back

any vision that has already been lost due to glaucoma.

Primary angle closure



To understand primary angle closure glaucoma, it's useful to understand how fluid flows in and out the eye and how this is affected by reduced or narrow angles.

Your eye pressure is controlled by watery fluid called aqueous humour, or just 'aqueous'. Aqueous is made in a ring of tissue that sits behind the iris called the ciliary body. It then flows through the pupil and drains away through tiny channels called the trabecular meshwork. The trabecular meshwork is found in the angle between the cornea and the

iris (often called the drainage angle). If this drainage angle is narrow, this can reduce how easily fluid escaping the eye. The angle is measured by an optometrist using a special lens called a gonioscopes.

Some eyes naturally have a narrower drainage angle for example, people with smaller eyes, people who are long-sighted or people of particular ethnic origins. This smaller angle can get even narrower, or even close completely, causing fluid to build up and eye pressure to rise.

PACG can be chronic or acute.

1. Acute angle closure attack

This is when the drainage angle is suddenly completely blocked and a rapid rise in intraocular pressure occurs. This is known as an attack of acute angle closure. Symptoms can include:

- Intense pain in and around the eye (often a dull, boring ache like toothache) that can be sore or tender to the touch

- Redness of the eye
- Blurred or reduced vision
- Headache
- Nausea or vomiting
- Seeing halos around lights
- The pupil is enlarged and does not constrict (get smaller) when the light is shone into the eye

The risk of developing this increases above the age of 40, although it most often occurs at around 50-60 years of age. Women are more likely than men to develop angle closure.

This condition must be treated quickly by an ophthalmologist (eye doctor) as a rapid rise in pressure can cause permanent damage to the vision. It is important that you visit A & E to start treatment to help reduce your eye pressure. The most common treatment at first is:

- Repeated pilocarpine eye drops which constrict the pupil and help to open the drainage angle.
- A medication called acetazolamide that quickly reduces the amount of fluid produced (by injection or

tablet/capsule)

- Eye drops - e.g. beta blockers to reduce the pressure and steroids to reduce the inflammation.
- If these measures fail emergency laser treatment 'iridoplasty' is sometimes used to reduce the eye pressure.

Once the intraocular pressure in your eye has reduced, it will be necessary to perform laser treatment called a peripheral iridotomy. This is usually performed on both eyes, to prevent an attack to the unaffected eye.

Local anaesthetic eye drops are used, and the procedure is carried out in the out-patient department.

The laser beam creates a small hole in the iris that allows the fluid to flow through the eye via a different route.

The iris then lies further back and the drainage system opens up. The small hole is normally positioned at the top of the iris just under the eyelid. If not treated, the pressure remains high and will cause irreversible damage to

the optic nerve and permanent loss of vision.

If there is a cataract forming in the eye it is often beneficial to remove this, as the lens becomes thicker, pushing the iris forward and closing off the drainage system. Sometimes a cataract extraction is done instead of the laser iridotomy.

Some medications have the risk of precipitating acute angle closure glaucoma. These include:

- Motion sickness medication
- Antihistamines
- Decongestants
- Asthma medication
- Some anti-Parkinson's drugs
- Some antidepressants (tricyclic antidepressants)
- Some nebulised drugs for asthma
- Anti-spasmodics e.g. medication for irritable bowel syndrome etc.

However if you have angle closure and have had a laser iridotomy or cataract operation, then there is very little risk in taking these medications.

You should always read the leaflet which comes with your medication and, if you have angle closure glaucoma, ask the advice of your ophthalmologist about the balance of risks involved in taking these drugs. **Do not** stop medications without seeking advice, as this can also be harmful.

2. “Sub-acute” attack

A person may suffer mild sub-acute attacks with symptoms of blurred vision, halos around lights and transient headaches without the full-blown attack. These may be resolved spontaneously after sleep but can recur. Sub-acute attacks often happen at night, and may feel better again after sleep. However, they can return. It is important to seek advice before a full-blown attack and possible damage occurs.

These attacks may be related to the use of certain medicines (such as those listed above) as these can cause pupil dilation. They can also happen in dim light e.g. in the cinema or theatre, during an adrenaline rush or state of

excitement. Eye drops used for dilating the pupil during an examination of the eye may trigger an attack, although this is rare.

Sometimes the drainage angle can be blocked for another reason, such as inflammation, haemorrhage (bleeding in the eye) or scar tissue. This is called secondary angle closure glaucoma and may be sudden or gradual.

3. Chronic Angle Closure

This is caused by contact between the trabecular meshwork and the iris over a long period of time. This usually becomes a problem when more than 50 per cent of these two structures are touching (i.e. for more than 180° around the iris).

The eye pressure may be raised for short periods of time before returning to normal, or it can stay high. There are no symptoms. Between periods of high pressure, the only sign of chronic angle closure is the narrow angle, until nerve damage becomes visible.

Relatives

Family members of those with angle closure glaucoma are 10 times more likely to develop it. Therefore we strongly recommend you contact your close relatives to let them know if you have angle closure glaucoma, so they can get their eyes tested. People over the age of 40 who have a close relative with glaucoma (e.g. parent/sibling) are eligible for a free eye test.

Driving

If you have been diagnosed with glaucoma in both eyes, you must inform the DVLA: this is the law. This does not mean you will automatically lose your licence. You will need to complete a visual field test (Esterman test) using both eyes. For more information on driving with glaucoma, our leaflet “Glaucoma and Driving” is available to download or order from our website, www.glaucoma.uk.

Remember

- If you develop side effects or symptoms you are concerned about, you should let your eye doctor know as soon as possible.
- Most people diagnosed with glaucoma today will not go blind, provided they stick to the treatment prescribed by their glaucoma specialist, and attend their follow up appointments.

Other booklets and leaflets which may be useful

You can order or download a range of free booklets and leaflets online from our website glaucoma.uk

Examples of booklets which may be of interest are:

- Laser treatment for glaucoma
- Driving and glaucoma
- Glaucoma and your relatives

About Glaucoma UK

- We fund sight-saving research into the early detection and treatment of glaucoma
- We campaign to raise awareness of glaucoma so that no one loses their sight needlessly
- We provide support that helps people to live well with glaucoma

Each year in the UK over 11,000 people are diagnosed with glaucoma. We are committed to providing our services free of charge to anyone who needs them. It is only through the generosity of our supporters that we can do this.

- make a donation by calling **01233 64 81 64** or donate online at www.glaucoma.uk
- become a member for £17.50 a year. Join online or call **01233 64 81 71**

Your support will make a difference to people with glaucoma today and will protect future generations from unnecessary glaucoma sight loss.

This free leaflet is brought to you by **Glaucoma UK** (formerly the International Glaucoma Association). Contact Glaucoma UK for further information or advice:

Glaucoma helpline: 01233 64 81 70

Monday-Friday 9.30am-5.00pm

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The information in this leaflet was correct at time of printing (printing date 06/2020)

A list of references is available upon request

Whilst every step has been taken to compile accurate information and to keep it up to date, we cannot guarantee its correctness and completeness.

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