

# Understanding glaucoma

Department of Ophthalmology

Information for Patients

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## What is glaucoma?

Glaucoma is an eye disease that damages the optic nerve. It leads to loss of side vision (peripheral vision loss).

It often happens because the pressure in your eye is too high. It can also be seen in patients with normal eye pressure.

If left untreated it can mean you only see the centre (tunnel vision).

Sometimes it can cause loss of the central vision. Going completely blind is rare.

## Why does glaucoma occur?

The eye needs pressure to keep its shape. The pressure comes from fluid in front of the eye. It is called the aqueous.

If there is too much of this fluid or it does not drain well, the pressure in the eye builds up. This damages the optic nerve damage and leads to glaucoma.

Some people can have high eye pressure without getting glaucoma. This is called ocular hypertension (OHT).

**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

Visit [www.leicestershospitals.nhs.uk](http://www.leicestershospitals.nhs.uk) for maps and information about visiting Leicester's Hospitals  
To give feedback about this information sheet, contact [InformationForPatients@uhl-tr.nhs.uk](mailto:InformationForPatients@uhl-tr.nhs.uk)

There are different types of glaucoma, but the main 2 types are:

- Open angle glaucoma (OAG): the fluid drains out of the eye too slowly.
- Closed angle glaucoma (CAG): the drainage canals are blocked. This leads to higher eye pressure.

## Who gets glaucoma?

In the UK about 2% of people have glaucoma. There are different risk factors for the 2 types of glaucoma:

Open angle glaucoma (OAG)	Closed angle glaucoma (CAG)
Older than 40 years age	Increasing age
Family history	Family history
African racial origin	Asian racial origin
Short-sightedness	Long-sightedness
Diabetes	Female
High blood pressure (Hypertension)	
Increased eye pressure (IOP)	
Vascular disease (affecting your circulation) e.g. heart attack, stroke	
Thin cornea	

Risk factors include family history. It is important to tell close relatives parents, children, brothers and sisters of your diagnosis. They will need to be seen by their local optician every year. It is very important if they are over 40 years of age.

## What are the symptoms of glaucoma?

Glaucoma often has no early symptoms. As it progresses slowly, many people do not notice sight loss until there are large areas of missing vision.

OAG has no symptoms, but sudden (acute) CAG can include symptoms such as:

- severe eye pain,
- a brow or headache,
- feeling sick (nausea),
- being sick (vomiting),
- haloes around lights and
- blurred vision, mainly in dim or dusk lighting conditions.

There is no cure for glaucoma. Getting a diagnosis and the right treatment can help to try and stop further damage or vision loss.

## How is glaucoma diagnosed?

A few tests need to be done to help diagnose glaucoma. These tests can take 2 to 3 hours on your first visit. These tests may include:

- **Visual acuity:** the level of vision you have wearing your distance glasses. We use a pinhole (a hand-held cover for your eyes). The pinhole helps find out the best vision your eye will have with an updated glasses prescription.
- **Visual field:** you will be asked to look straight ahead. A light spot appears in different areas of your peripheral vision. It helps draw a 'map' of your vision. Do not be concerned if there is a delay in seeing the light. It moves in or around your blind spot. This is perfectly normal. It does not mean that your field of vision is damaged.

Try to relax and respond as accurately as possible during the test. Your doctor may want you to repeat the test to see if the results are the same the next time you take it. After glaucoma has been diagnosed, visual field tests are usually done 1 to 2 times a year to check for any changes in your vision.

The eye doctor will then call you in to check the front of the eye. We use a large microscope called a slit lamp. They may put numbing drops into your eye and do 3 more tests:

- **Tonometry:** measures your eye pressure. It is also known as intraocular pressure (IOP). A small disposable device will touch the eye to find this out. The normal IOP range is 12 to 21 mmHg; but, some people still have glaucoma in the normal IOP range.
- **Gonioscopy:** checks if the drainage angle where the iris meets the cornea is open or closed. A hand-held, mirrored contact lens is gently placed on the eye. It lets the eye doctor see the drainage angle.
- **Pachymetry:** measures the thickness of the clear window at the front of the eye (cornea). We gently place a probe on the front of the eye. This measurement helps the eye doctor find out if treatment will be needed and if the IOP readings are affected by this.

After these checks, you will have more eye drops ready for more tests. These help to open your pupil wider to get a clearer view of your optic nerve and back of the eye. The dilating drops can cause blurry vision and light sensitivity for 4 to 6 hours. You must not drive or operate machinery for this time.

- **Optical Coherence Tomography (OCT):** takes a photo of the optic nerve and back of the eye.
- **Optic nerve assessment:** we use a special lens with the slit lamp. We will shine a bright light into your eyes.

## What is the treatment for glaucoma?

The main goal is to lower eye pressure and stop further sight loss. Some patients may need a mix of treatments to help control their glaucoma. Types of treatments include:

- **Eye drops:** first line of treatment. There are 4 types of drops which can be used. Your eye doctor will decide the best type of drop for you. If eye drops alone do not control the IOP well enough, laser treatment or an operation may be needed.

The 4 types of eye drops are:

1. prostaglandin analogues (for example, Latanoprost),
2. beta blockers (for example, Timolol),
3. carbonic anhydrase inhibitors (for example, Azopt),
4. alpha agonists (for example, Brimonidine).

As with all medication, there are known side effects linked with glaucoma eye drops. Your eye doctor or specialist nurse will advise you about these.

- **Laser treatment:** there are 3 types of laser treatment:
  1. Selective laser trabeculoplasty
  2. Cyclodiode laser
  3. Laser peripheral iridotomy
- **Surgery:** options such as a trabeculectomy or tube surgery if other treatments have been unsuccessful.

## Can I still drive?

Most people can carry on driving long term if the vision loss is not severe. **You need to tell the Driver and Vehicle Licensing Authority (DVLA) if you are diagnosed with glaucoma in both eyes.** The DVLA may arrange a special visual field test (Estermann) through an optician to make sure your sight meets the standards of the DVLA.

## Tips to help you stay on track with your medication routine

- Make a schedule: write down the name, dosage and number of times your medication(s) should be taken each day.
- Use an alarm or smartphone to set reminders. There are many smartphone apps now available.
- Schedule medication(s) around daily routines like when waking up and at mealtimes. Remember that 2 times a day means every 12 hours, for example 7am and 7pm.
- Put your medication(s) and your schedule in a place where you will see them often, such as on the refrigerator door or above your desk at work.
- You may find colour coding your medication(s) will help you pinpoint them easier.
- Take your medication(s) with you when you go out.
- If you forget to use your eye drops, put them in as soon as you remember. Do not wait until the next scheduled time. Get back on your regular schedule for the next dose.

- Always check with your doctor if you are not sure about any part of your medication routine. You may want to show your doctor how you put in your eye drops to be sure you are doing it in the best way.

## **Most important things to prevent glaucoma getting worse**

- Use your eye drops correctly every day. Use them at the time and frequency that you are told by the doctor.
- Go to all your appointments at the eye clinic. These appointments are very important to check on your glaucoma and to see if it is getting worse. If you are cannot attend, you should always phone to rearrange.
- Please bring a list of your current medications with you to each clinic appointment in case there has been any changes to your medication since your last visit. This lets us give you the best treatment, based on what medication you may already be on.

## **More information**

If you would like to find out more information about glaucoma and your eye condition, please use the useful contact information below.

### **Royal National Institute of Blind people:**

[www.rnib.org.uk/](http://www.rnib.org.uk/)

0303 123 9999 / email: [helpline@mib.org.uk](mailto:helpline@mib.org.uk)

### **The Royal College of Ophthalmologists (RCO):**

[www.rcophth.ac.uk/](http://www.rcophth.ac.uk/)

020 7935 0702

### **International Glaucoma Association (IGA):**

[glaucoma.uk/](http://glaucoma.uk/)

01233 648 170

### **Driver and Vehicle Licensing Agency (DVLA):**

[www.gov.uk/government/organisations/driver-and-vehicle-licensing-agency](http://www.gov.uk/government/organisations/driver-and-vehicle-licensing-agency)

0300 790 6801

## The Partially Sighted Society (PSS):

[www.partsight.org.uk/](http://www.partsight.org.uk/)

0844 477 4966

## VISTA:

[www.vistablind.org.uk](http://www.vistablind.org.uk)

0116 249 8839 / email: [info@vistablind.org.uk](mailto:info@vistablind.org.uk)

## What to do if you have any concerns

If you want to discuss the procedure in more detail or have any other queries that cannot wait until your appointment, you can contact the glaucoma specialist nurse on **07950 857406**.

If you think you may have a problem after your treatment you should contact **Eye Casualty on 0116 258 6273**, or go to the **Eye Casualty Department** located in Windsor Eye Clinic, Level 1, Windsor Building, Leicester Royal Infirmary:

Opening times: Monday to Friday, 8.30am to 4.30pm

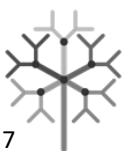
Saturday and Sunday, 8.30am to 12.30pm

If your problem happens outside of these hours and you feel that it is urgent, you should go to the main Emergency Department.

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔  
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