

Having laser iridotomy treatment for glaucoma

Department of Ophthalmology

Information for Patients

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What is laser iridotomy?

Laser iridotomy is a treatment where a laser beam is used to make a small hole in the coloured part of your eye (iris).

This allows fluid to move freely within the eye; this lowers the risk of a rise in pressure in the eye which could threaten your eyesight (known as acute primary angle closure or “acute glaucoma”), or lowers the risk of increased crowding of the drainage canal of the eye (see figure 2 for an explanation of crowding).

Why might I need laser iridotomy?

Laser iridotomy is a treatment used for patients who have, or are at risk of getting, a particular type of glaucoma called angle closure glaucoma.

There are 3 reasons for this procedure:

- To try and help stop an attack of acute glaucoma.
- To treat an attack of acute glaucoma.
- To treat a partial or completely closed drainage canal.

This laser procedure is done to help you keep your eyesight. It will not bring back vision that has already been lost.

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How does laser iridotomy work?

Normally, the production of fluid in the eye is balanced by the fluid draining out of the eye.

Figure 1 shows the normal flow of fluid in the eye - from the site of production, through the pupil and into the drainage canals (curved arrow).

If not enough fluid can escape through the drainage canal due to crowding of the angle by the iris, then the pressure inside the eye will rise.

High pressure in the eye can cause damage to the optic nerve (glaucoma) and can lead to loss of vision that you can't get back.

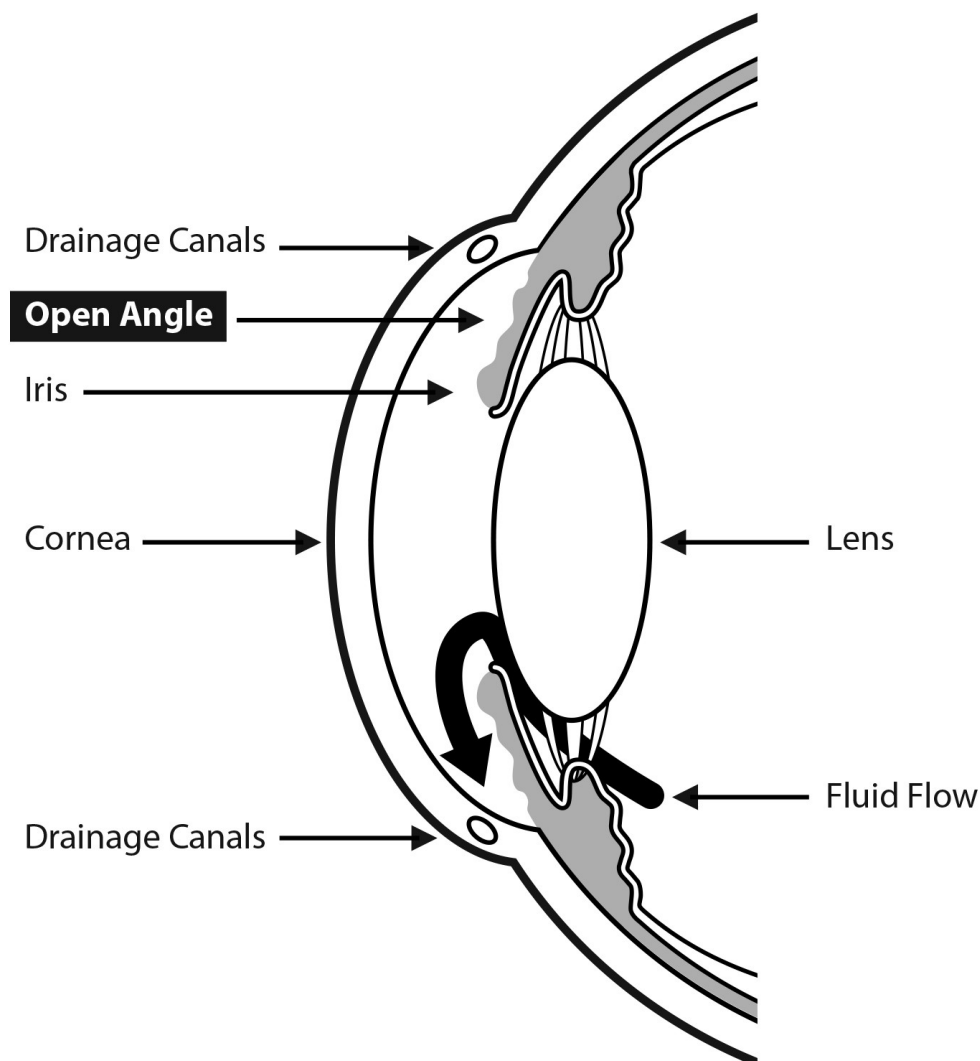


Figure 1: Normal drainage system of the eye

Figure 2 shows the drainage canal being blocked by the iris, which means the fluid in the eye cannot get into the drainage canals. This causes pressure to build up in the eye. This is known as crowding.

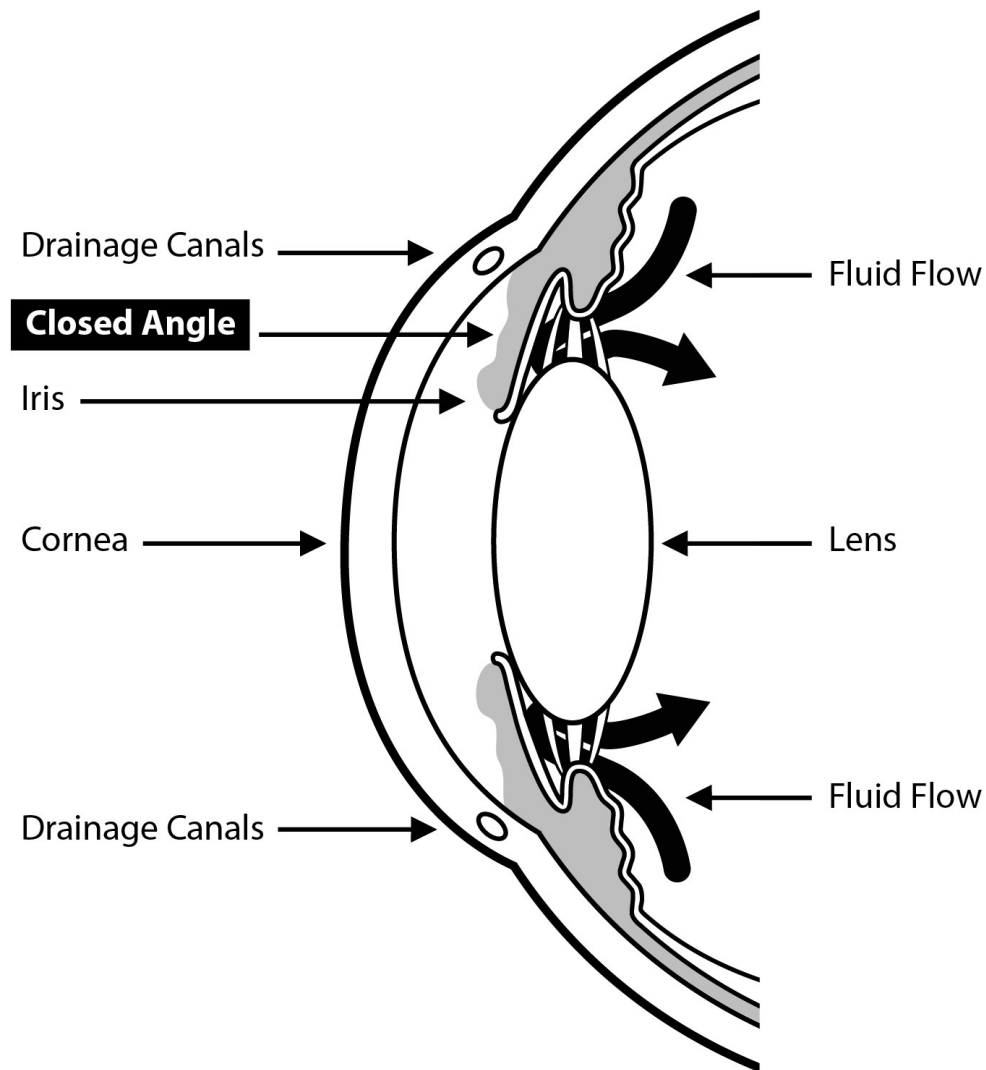


Figure 2: Crowding of the angle by the iris

The laser treatment delivers a beam of energy which is used to make a small hole in the iris. This small hole allows the fluid to flow freely again into the front part of the eye and into the drainage canal.

If your iris is dark in colour (darkly pigmented) it may be necessary to treat the iris with another type of laser, before the laser iridotomy, to make it easier and safer for the laser to make the small hole in the iris. Your eye doctor will talk to you about this if needed.

Sometimes the treatment may need to be repeated for these reasons:

- Even though the hole appears fine when created, it may be found to be too small when you are checked in clinic.
- A small hole can partly or completely heal up in the first few days after treatment, and further treatment to enlarge the hole or create a new hole may be needed.
- It is hard to go through the iris completely in 1 treatment, or if there is a little bleeding the treatment is paused and finished on another day.

What happens on the day of the procedure?

The laser treatment is done in the outpatients clinic. When you arrive at the clinic your vision will be checked and drops will be put into your eye(s).

Please note that 1 of the drops often causes a headache across your brow. This will wear off after a few hours.

The doctor will explain why you are having this treatment, if you have not been told at an earlier appointment. They will also ask you to sign a consent form.

You will be taken into the laser room where you will be sat at a machine with a chin and headrest. The doctor will put more drops in to numb the front of your eye before a special magnifying contact lens is placed on it.

The laser treatment will then be given. When the laser is being applied you may feel a sharp discomfort in the eye to start with.

Afterwards, you will be given a prescription for anti-inflammatory (steroid) eye drops. If your eye pressure is raised after treatment, you may be prescribed some eye drops or tablets for a short while to protect your eye.

You will be told when we need to see you again in clinic.

What are the side effects and risks of this treatment?

Side effects after this treatment are uncommon. The main risks are:

A rise in the eye pressure (intraocular pressure) - this can happen straight after treatment or found at your follow-up appointment. If this happens, you may be prescribed some extra eye drops or tablets. If the eye pressure remains high even with extra treatment then surgery may be needed to lower this.

Bleeding/ inflammation - bleeding happens when a small blood vessel bursts during treatment; this is stopped by applying pressure with the contact lens that is used during treatment.

The anti-inflammatory eye drops given to you after your treatment will help to reduce swelling (inflammation) in the eye. If there is still inflammation in the eye at your follow-up appointment you may be asked to carry on using the eye drops for 1 to 2 weeks longer.

Visual disturbance - if visual disturbances happen after your treatment, you may notice any of the following:

- A line in your vision (horizontal or curved in up to 11% of patients)
- Ghosting (double vision)
- Glare
- Shadows in your vision
- Crescents
- Blurred vision (up to 48 hours after laser)

If you have a visual disturbance after treatment, it usually settles down over time (up to 12 months) and you will notice it less, or it will disappear as your brain gets used to it.

Loss of vision - there is a small risk of loss of vision after treatment, but the risk is low.

What is the risk of not having the treatment?

The risks of not having treatment depends on your condition.

If your eye pressure is normal, there is a small risk of getting sudden high pressure (acute glaucoma) or closure of the drainage canal over time.

However, if your eye pressure is high, there is a high risk of getting glaucoma within 5 years.

No matter your eye condition, there is also a small risk of a sudden, large rise in the eye pressure, which can lead to sickness, severe pain, an inflamed eye (red eye) and reduced vision. This is called acute primary angle closure or acute glaucoma and is considered an eye emergency.

What happens after the procedure?

You will be seen in the outpatients department a few weeks later to make sure your eye has settled down well after your treatment.

If you have discomfort once you get home after your treatment, we suggest that you take your usual painkillers.

The eye drops used before the laser can cause a headache across your brow. As the drops also make your pupil small, you may find a dim or dark room is darker than usual.

It is normal to have gritty, sticky eyelids and some discomfort for a couple of hours after laser treatment. The eye drops can also take some time to wear off. You should not be worried if your pupils are still small for a few hours after treatment.

By the following morning the drops will have worn off, and your pupils should be back to their normal size again.

You may find your vision is a little blurred. This is normal and your vision should return to how it was before the treatment over the next 1 to 2 days.

What do I need to do when I go home?

We will prescribe anti-inflammatory (steroid) eye drops after your laser treatment. These help to reduce inflammation of the eye. Most people normally only have to take these for 1 week.

If you are using other eye drops for your glaucoma, please check with the doctor whether or not you need to carry on using them on your treated eye. It is usual to continue using them unless your doctor has said not to.

If you are using glaucoma drops to the untreated eye, please carry on using them unless you are told not to.

You should be able to do all of your daily activities as you would normally without any problems.

How successful is laser iridotomy?

Laser iridotomy is very successful.

If in your follow-up visit the iridotomy hole is open and of a good size, it can open up the drainage angle in 60 to 80% of patients.

The remaining 20 to 40% of patients in whom the drainage angle still remains narrow or does not open, may either be observed or need further treatment such as eye drops or surgery.

If more treatment is needed, this will be discussed with you in detail during your follow-up appointment.

What to do if you have any concerns

If you want to talk about the procedure in more detail or have any other queries that cannot wait until your appointment, you can contact the ophthalmic secretaries on **0116 258 5928**.

If you think you may have a problem after treatment, please contact Eye Casualty on **0116 258 6273** or go to the Eye Casualty Department - Windsor Eye Clinic, Level 1, Windsor Building, Leicester Royal Infirmary.

Opening times: Monday to Friday - 8.30am to 4.30pm
Saturday & Sunday - 8.30am to 12.30pm

If outside of these hours and you feel that it is urgent, please go to the main Emergency Department. They will check your problem and talk to the on-call ophthalmologist.

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