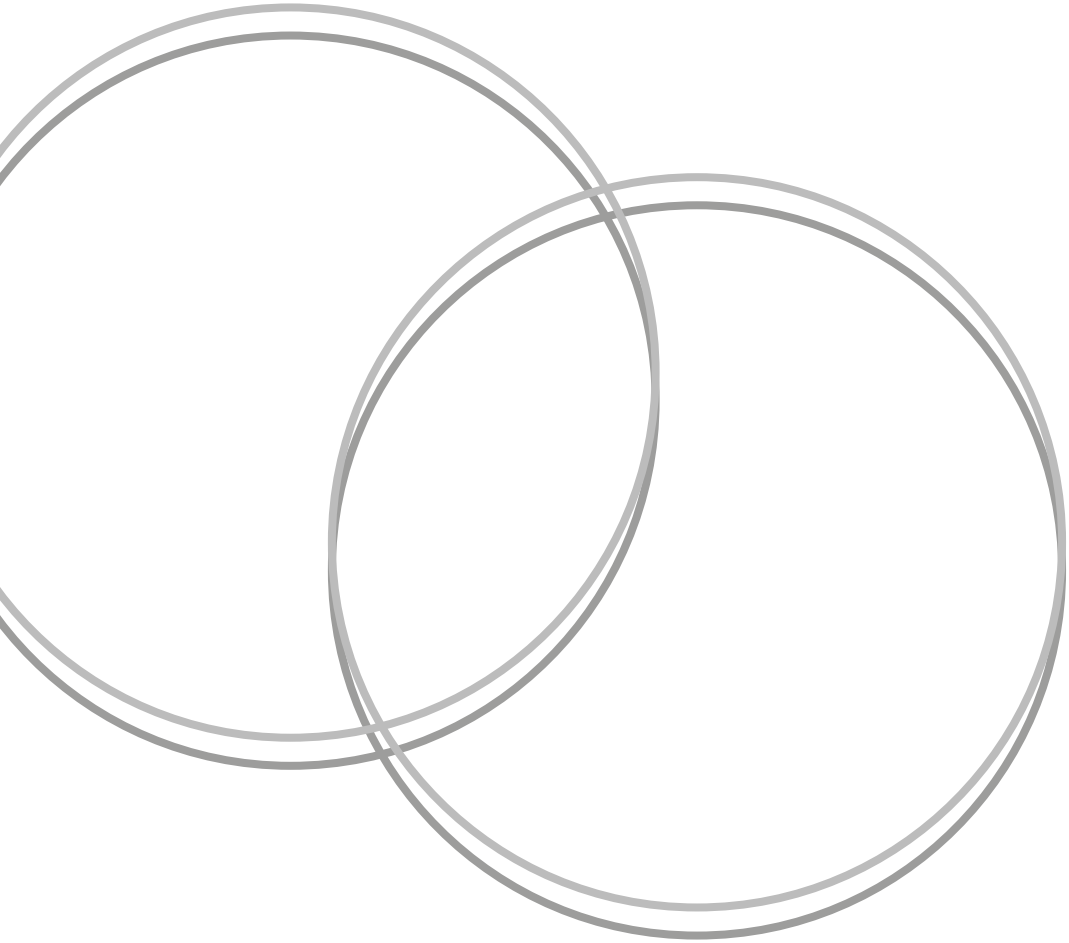
NHS
Oxford University Hospitals
NHS Foundation Trust

Laser Iridotomy

Information for patients



Oxford Eye Hospital

This leaflet has been written to give you information to help you decide whether to have laser iridotomy.

What is laser iridotomy?

Laser iridotomy is a procedure where a laser beam is used to make a small hole in your iris (the coloured part of your eye). The iridotomy (or hole in the iris) allows the fluid in the eye (aqueous humour) to circulate freely and open up your drainage canal.

The laser iridotomy also minimises the risk of pressure rising in your eye rapidly, which could damage your sight (known as acute primary angle closure or acute glaucoma).

Why might I need laser iridotomy?

Laser iridotomy is a treatment used if you have, or are at risk of developing a particular type of glaucoma called angle-closure glaucoma.

There are three reasons for this procedure:

- to prevent an attack of acute glaucoma
- to treat an attack of acute glaucoma
- to treat a narrow or closed drainage channel.

This procedure is carried out to help preserve your current level of sight. It will not restore or improve your sight.

How does laser iridotomy work?

Normally, the production of fluid within the eye is balanced by the fluid draining out of the eye. The diagram on page 4 shows the normal flow of fluid in the eye (the curved arrow). If not enough fluid can escape through the drainage canal due to 'crowding' of the angle by the coloured part of the eye (the iris), then the eye pressure will rise.

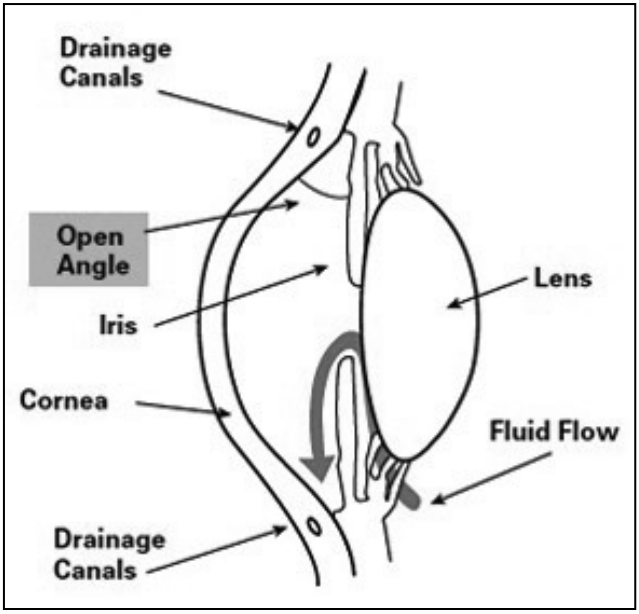
High pressure in the eye can cause damage to the optic nerve (the nerve that links the eye to the brain) and can lead to permanent loss of vision.

The diagram below shows the drainage canal being blocked by the iris, resulting in the fluid within the eye not being able to get to the drainage canals.

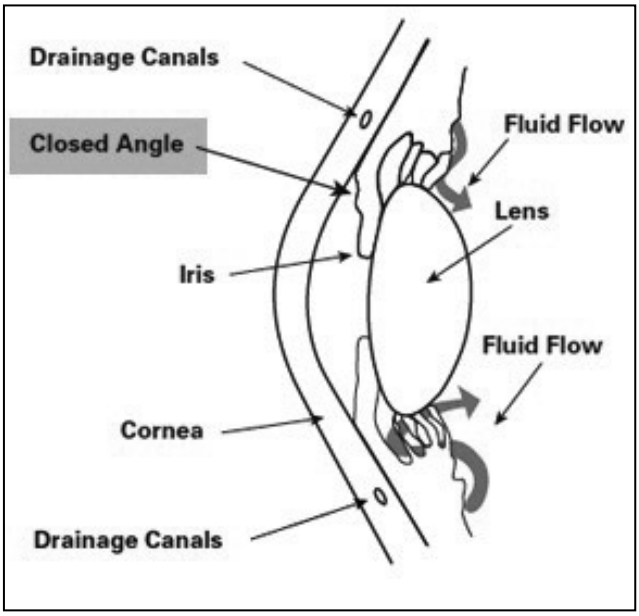
The laser delivers a highly concentrated beam of energy, which is used to make a small hole in the iris. This small hole allows the fluid in the eye to bypass the crowding and flow freely again into the front chamber of the eye, pushing the iris back and therefore gaining access to the delicate drainage system (the drainage canals).

If your iris is darkly pigmented (coloured) we may need to pre-treat it with another type of laser. This can make it easier and safer for the laser to make the small hole in the iris during the iridotomy procedure. We will discuss this with you, if it is necessary.

The normal drainage system of the eye



Crowding of the angle by the iris (closed angle)



Risks or side effects of laser iridotomy

It is not common to have complications after this treatment. The main risks are:

Raised eye pressure (intraocular pressure)

This may occur immediately after the procedure or be detected at your follow-up appointment. If this happens, you may need extra treatment with eye drops and sometimes tablets. If your eye pressure continues to be raised, despite extra treatment, then you may need surgery to lower your eye pressure.

Bleeding/inflammation

Bleeding can occur if a small blood vessel bursts during the treatment. It can be stopped by applying pressure with the lens used on your eye during the treatment.

After the treatment, you will be prescribed steroid drops to reduce inflammation in your eye. If there is still inflammation in your eye at your follow-up appointment then the steroid drops may be continued for another 1 to 2 weeks.

Visual disturbance

If this occurs you may notice one or more of the following symptoms:

- a line in your vision (horizontal or curved)
- ghosting (a faint double image)
- glare
- shadow
- crescents
- short-term blurred vision (up to 48 hours after the treatment).

If you experience a visual disturbance after the treatment, it will usually settle down over time (up to 12 months). It will become either less noticeable or disappear, as your brain adapts to it. However, 1 in 1,000 people may still experience symptoms at 12 months. If you still have symptoms at 12 months which are troublesome, your surgeon will discuss treatment options with you.

Change in glasses prescription

Following the laser treatment, your glasses prescription may change, due to the front chamber of your eye containing more fluid and pushing the iris back. If you feel your prescription may have changed, we recommend you see your optician at your earliest convenience.

Reduced/loss of vision

There is a small risk of reduced vision following the procedure. The risk of total loss of vision is very rare.

Need for repeat treatment

(See the next section.)

How successful is laser iridotomy?

Laser iridotomy is very successful and very effective at protecting against acute primary angle closure.

Following your laser, once there is a good sized opening in the iris, the drainage angle will be wider in 60 to 80% of people having the treatment (60 to 80 in 100).

If the drainage angle still remains narrow or does not open, this may either be monitored at further clinic appointments or require further treatment, such as drops or surgery.

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

The laser treatment may need to be repeated for the following reasons:

- Even though the hole appeared adequate when created, it may be found to be too small when you are reviewed in clinic a few weeks later.
- Occasionally a small hole can partly or completely heal up in the first few days after the laser treatment. Further treatment to make the hole bigger or create a new hole may be required.

Sometimes it may be hard to penetrate the iris completely during the initial treatment, or a little bleeding may obscure the view of the iris, meaning treatment needs to be suspended and completed on another day.

What is the risk of not having the treatment?

The risks of not having the laser iridotomy depend on your eye condition when you are first seen by an eye doctor for this condition.

If your eye pressure is normal, there is a small risk of developing a sudden high pressure which can lead to sickness, severe pain, an inflamed eye (red eye) and reduced vision (which can be permanent). This condition is called acute primary angle closure or acute glaucoma and is considered to be an eye emergency.

Alternatively, your drainage angle may close up further over time resulting in your eye pressure becoming raised. If your eye pressure is raised (without damage to your nerve or glaucoma) there is a significant risk of developing glaucoma within a five year period.

On the day of the procedure

On the day of your treatment, we advise that you do not drive as your vision is likely to be blurred after the procedure.

The laser treatment will be carried out in the Eye Outpatients clinic.

When you arrive you will be given an identification wristband. Your vision will be assessed, and drops will be put into your eye. These are to help with the treatment by making your pupil smaller and reducing the risk of bleeding and a rise in your eye pressure.

One of the drops often has a side effect of causing a 'brow headache' which is usually mild. This will wear off after a few hours.

The doctor will explain the treatment again and ask you to sign a consent form, to confirm you are happy to go ahead with the procedure. If you have any questions, please speak with the surgeon/doctor before signing the consent form.

What happens during the procedure?

You will be taken into the laser room, where you will be asked to sit in front of the laser. This looks similar to the microscope you will have been examined with in the Eye Clinic.

The doctor will put more drops in, to numb the front of your eye. These will sting for a short while but will soon go numb. During the laser is important that you keep as still as possible to enable the doctor to perform the procedure as safely as possible.

A special magnifying contact lens and a cold gel will be placed on your eye. This helps keep your eye open, to allow the doctor to carry out the treatment. You may feel a cold sensation and some pressure, but the lens will not hurt.

The laser treatment will then be given. It takes about 10 minutes to carry out. During the laser treatment you may experience a sharp discomfort in your eye at the beginning for a few seconds and then you will feel very little discomfort.

What happens after the procedure?

Your eye pressure will be checked by the doctor 1 to 2 hours after the procedure.

If your eye pressure is raised after the laser iridotomy procedure you may be prescribed some eye drops or tablets for a short while. These help to protect your eye from damage due to the high pressure.

You will be seen in the Eye Outpatient Department 1 to 2 weeks later, to make sure your eye has responded well to treatment.

If you have discomfort when you get home, you can take regular paracetamol for 1 to 2 days. If your pain does not settle after 2 days, you should call our emergency telephone triage line for advice (see page 13).

It is normal to have gritty, sticky eyelids and mild discomfort for a couple of hours after the laser iridotomy treatment. The eye drops instilled before the laser can also take some time to wear off, so you should not be alarmed if your pupils are still small for several hours after the treatment.

We will prescribe you anti-inflammatory (steroid) eye drops after your laser treatment, which can help to minimise inflammation of your eye. **You will need to use these every hour for the first day (daytime only and not during the night) and then four times a day for one week. You should then stop using them.**

The drops that were put into your eyes before the treatment can cause a mild to moderate headache across your brow. As they make your pupils small, you might also find that if you go into a dim or dark room it is darker than expected. The medication in the drops will have worn off by the following morning and your pupils should be back to their normal size again.

You may also find your vision is a little blurred after the procedure. This is normal and your vision should return to how it was before the treatment over the next 1 to 2 days. If your vision is very blurred or has not improved after 2 days, you should call the Eye Emergency triage line for advice (see section 'How to contact us on page 13).

If you are using glaucoma drops, please check with the doctor whether or not you need to continue using them on your treated eye. If you are using glaucoma drops on your untreated eye, please continue to use them unless instructed otherwise.

How to contact us

Please contact us if you have any questions or concerns either before or after your procedure.

Telephone: **01865 234 567** Select option 1 for patients and then option 2 for Eye Surgery.

Please note this line directs you to an answerphone service, which is checked and responded to by a Nurse Practitioner 3 times a day, 7 days a week at 8am, 12pm and 4pm. If you call after 4pm your call will be responded to the following day.

Email for appointment enquiries:
eye.hospital@ouh.nhs.uk

Call specialist telephone triage number if you need URGENT help or advice or if you notice:

- Redness and/or swelling of your eye lids and/or eyeball
- Any loss of sight
- Intense Pain

Telephone: **01865 234 567** option 1 followed by option 1

Monday to Friday 8:30am to 4:30pm

Saturday and Sunday 8:30am to 3:30pm
(including Bank Holidays)

You will be able to speak to an ophthalmic health professional who will advise you.

If you need advice out of hours, please phone NHS 111 or your out of hours GP practice.

Oxford Eye Hospital – Glaucoma Service

Surgery/laser/assessments are performed by the specialist glaucoma team in the department.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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Oxford University Hospitals NHS Foundation Trust
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Oxford Hospitals Charity

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