

# Having selective laser trabeculoplasty (SLT) or direct selective laser trabeculoplasty (DSLT) treatment for glaucoma

Department of Ophthalmology

Information for Patients

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## What is selective laser trabeculoplasty (SLT)?

There are many treatment options to lower the eye pressure (intraocular pressure) in open angle glaucoma (OAG). This includes intraocular pressure lowering eye drops, laser and surgery.

Selective laser trabeculoplasty (SLT) or direct selective laser trabeculoplasty (DSLT) is 1 laser option. It lowers intraocular pressure (IOP) for patients with OAG in the early stages. Or for patients with raised IOP without glaucoma.

We do 2 types of SLT. They both give the same good results:

1. **Contact SLT:** Standard method. We rest a special focusing lens gently on the front of your numbed eye. This takes about 10 to 15 minutes per eye.
2. **Direct SLT (DSLT):** A newer 'non-contact' option. A highly advanced machine tracks your eye and gives laser in 2 to 3 seconds per eye. This is done without touching your eye surface. This enhances comfort and speed.

## How does SLT/ DSLT work?

Inside your eye, there is a special drainage system called trabecular meshwork (TM). The TM helps to drain fluid from your eye. However, in OAG this system is partly blocked or not working properly.

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

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To give feedback about this information sheet, contact [uhl-tr.informationforpatientsmailbox@nhs.net](mailto:uhl-tr.informationforpatientsmailbox@nhs.net)

The laser treatment will try to fix the TM drainage. We send a short pulses of low energy laser to melanin rich cells in the TM. We do this without damaging the rest of your eye. These melanin rich cells, which help protect the eye, can block or narrow the TM.

When the laser hits the cells, it tells the body to react in a way that helps clear the blockage. This helps lower the pressure inside the eye. This is important for keeping the eye healthy.

## **Is this the right treatment for me?**

SLT/DSLT lowers the IOP in the eye and helps keep it more stable. When a person has an unstable IOP, they may have a high IOP at one clinic visit and low on the next. This change (fluctuation) shows a risk factor for glaucoma becoming worse.

This treatment may be suitable for you if:

- you cannot manage to use your eye drops.
- your eye drops are causing side effects or an allergic reaction.
- your eye drops do not help with your symptoms.
- your IOP needs lowering more and eye drops are not a way to do this.

## **How successful is SLT/DSLT treatment?**

- Studies show that it can lower IOP by up to 30%. This is a similar result to the most common type of eye drop used for glaucoma.
- The response to this treatment may take up to 3 months to take effect.
- Studies show that after a single treatment, it has worked (with no more SLT/DSLT treatment being needed) in up to 40 to 60% of patients.
- Although the effect can wear off with time, the treatment can be repeated. However, the response to the treatment may not be as much as with the first treatment.

## Are there any risks or side effects?

This treatment has been safely used over the years, however, there may be uncommon side effects. These include:

- **Blurred vision:** your vision will look blurry for up to 24 hours after your treatment. This should settle. As with any laser treatment, there is also a very small chance (1 in 10,000 patients) of losing some of your vision or of losing your vision completely. If you think that your vision is not returning to normal, please go to Eye Casualty.
- **High IOP:** it is possible for your IOP to increase straight after the treatment (1 in 20 patients). If this happens, you will be given more eye drops. It is rare (1 in 10,000 patients) that if the eye drops do not work you may need surgery.
- **Inflammation** in the eye (1 in 20 patients).
- **Eye pain** (1 in 20 patients): we will give you anti-inflammatory eye drops. Use these if you have any pain.
- **Little or no effect:** if the treatment does not lower your IOP, you may need more eye drops or surgery.

## What happens on the day of treatment?

Please make sure you are not driving after the procedure.

The treatment takes place in the outpatient department. A member of staff will check your vision. An eye doctor or a specialist nurse will put some IOP lowering drops into your eye. The doctor or the nurse will also take your written consent and give you a chance to ask any questions.

You will sit at a laser machine that will look similar to a microscope. You will have used this machine before in the clinic. We will put anaesthetic drops to numb the front of your eye. These will sting, but only for a short time.

It is very important for you to:

- Be seated comfortably with your chin in the chin rest and forehead pressed against the forehead band of the machine.
- Stay relaxed and still during the laser procedure. Any movement might defocus the laser and it may not work as well as it should.
- For **SLT special lens** (with 'cold' gel on it) we will then place it against the front surface of your eye. This is not painful, but you may feel a little pressure.



During the laser treatment, you might see some flashes of light and hear clicking noises.

- Some patients might feel slight discomfort during the treatment. The procedure takes 10 to 15 minutes per eye.
- For **DSL**T you will be standing up with forehead against the forehead band of the machine. Your chin will be in the chin rest. The machine has an eye tracker which locks on. You will hear loud click and see green glow for 2 to 3 seconds.
- The doctor or the nurse will put some more pressure lowering drops into your eye at the end of the treatment. They will re-check your eye pressure 30 to 60 minutes later.

## What happens after treatment?

We may send you home with a prescription for anti-inflammatory eye drops. You should only use this if you have any discomfort in your eyes. Please **do not stop** your glaucoma drops until we see you at your follow-up appointment.

We will make another appointment for you to come back to clinic. This is often 2 weeks later. This follow-up appointment is to check your eye pressure and that your eye is settling. We will arrange another follow-up at this time to confirm if the laser has worked at this 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 please contact us:

- Leicester Royal Infirmary: **0116 258 6864**
- Rutland Memorial Hospital: **0157 272 2522**

If you think you may have a problem after your treatment, contact:

Eye Casualty Department: **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

Weekends & Bank Holidays: 8.30am to 12.30pm

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Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

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