

Selective Laser Trabeculoplasty (SLT)

Information for patients



This leaflet gives you information to help you decide whether you want to have selective laser trabeculoplasty.

What is selective laser trabeculoplasty (SLT)?

There are a few treatment options available to reduce eye pressure (also known as intraocular pressure or IOP) if you have open-angle glaucoma or raised eye pressure without glaucoma (ocular hypertension or OHT). These include IOP lowering drops (referred to as drops), laser procedures and surgery.

Selective laser trabeculoplasty (SLT) is one of the laser procedure options.

How does selective laser trabeculoplasty work?

The major drainage system of your eye is called the trabecular meshwork. In open-angle glaucoma or ocular hypertension, this system has reduced drainage capacity, which causes the pressure in your eye to rise.

SLT involves aiming short pulses of low energy laser specifically aimed at the trabecular meshwork (hence the name 'selective'). The laser targets the pigment (melanin) cells within the meshwork, but leaves surrounding tissue intact. The laser works by stimulating the trabecular meshwork to drain more fluid (aqueous humour) out of the eye and thereby lower the IOP.

Is this the right treatment for me?

SLT can lower the pressure in your eye and reduce pressure spikes or fluctuations in your eye pressure.

SLT may be suitable for you if:

- You have high IOP known as ocular hypertension (OHT)
– high IOP in the eye without any damage to the nerve
- You have open angle glaucoma
- You are having difficulty in applying your drops
- Your drops are causing you side effects
- Your eye pressure is not controlled with your drops

Your doctor will be able to advise if any of these apply to you.

How successful is selective laser trabeculoplasty?

Research shows that SLT can reduce eye pressure by up to 30%, with better long-term control of eye pressure and glaucoma compared to initial treatment with drops. It has also been shown that patients treated with SLT are less likely to require glaucoma surgery compared to patients treated with glaucoma drops alone.

Benefits of SLT (compared to drops):

- **More effective long term pressure control compared to drops** (In the longest study to date, 70% of patients (70 out of 100) had controlled IOP without the need for drops or surgery. 90% of these patients needed 1 or 2 SLT treatments to achieve this result.)
- **Less likely for glaucoma to worsen** (compared to drops)
- **Reduced need for glaucoma surgery** to control the IOP
- **Reduced risk of cataract formation**
- Allows patients to manage their condition without daily eye drops for several years

How well SLT helps lower the IOP is affected by several factors. These include:

- Age (less effective the older the age)
- Eye pressure (the higher the eye pressure, the greater the effect of SLT)
- Previous glaucoma treatments (SLT less likely to lower the IOP)
- How severe the glaucoma is before treatment (SLT is less likely to have an effect on IOP)

How long does the treatment take to work?

The response to SLT may take up to 4 months to take effect.

Although the effect of SLT can wear off with time, the treatment can be repeated. 40-60% of patients (40-60 people out of 100 people) do not require any repeat SLT treatment at 4 years after their initial SLT treatment.

However, if repeat treatment is suggested, the effect with repeat SLT has been shown to be as effective as or more effective than the initial treatment.

There is a chance this procedure will not lower the pressure in your eye at all. This can occur in approximately 20% of patients (20 out of 100 patients). If SLT doesn't work, you may need to either start drops or use additional eyedrops or you may need to have surgery. Longer term research shows that around 70% of patients (70 in every 100 patients) treated with SLT do not require any additional medical (drops) or surgical treatments at 6 years after their initial SLT treatment.

It is important to note that SLT does not cure glaucoma, as glaucoma is an irreversible condition, however it does reduce the eye pressure to help slow or prevent visual loss from glaucoma. Continual follow up and monitoring with an eye specialist is essential as raised eye pressure and glaucoma are **asymptomatic** for the majority of patients, and only through monitoring will we be able to assess if your condition is stable or getting worse.

Risks or side effects of SLT

SLT has a good safety record of over 20 years. However, there are some uncommon side effects.

- **Temporary blurred vision:** your vision may be blurred for up to 48 hours after the procedure, but the chance of your vision being permanently affected by SLT is extremely small
- **Temporary eye discomfort and sensitivity to light:** This is quite common for the first 2-3 days after SLT. If you experience these symptoms, you can take paracetamol or ibuprofen. Occasionally, we may prescribe you anti-inflammatory drops for a few days after treatment
- **High intraocular pressure (IOP):** The pressure in your eye can rise immediately after the treatment. We therefore ask you to stay for 30-60 minutes after the procedure for a pressure check. If the pressure does rise you will be asked to use additional drops or tablets to lower the pressure over the following week. About 1% (1 in 100 patients) can have higher eye pressures (compared to before the laser) at their 6 week review.
- **Reduced vision:** This is a very rare side effect. If you experience this, you must go to the nearest Eye Emergency department as soon as possible (see page 12 for details).

Preparing for selective laser trabeculoplasty

Your doctor **may** advise you to stop your drops for 4 weeks before the SLT depending on your condition, and might change your regimen after the treatment.

The drops you might be asked to stop are:

- Latanoprost (Xalatan/Monopost)
- Bimatoprost (Lumigan)
- Tafluprost (Saflutan)
- Travaprost (Travatan).

Your doctor will tell you in clinic if the drops need to be stopped.

If you are NOT SPECIFICALLY told to stop your drops either before or after SLT, please CONTINUE your drops.

On the day of the procedure

You will not be allowed to drive after the SLT. Please make sure you have arranged for someone to collect you. You should not go home on public transport. You should be taken home by car. This will be more comfortable and quicker for you.

SLT treatment takes place in the Eye Outpatient Department. After checking in at reception you will be given an identification wristband. Your vision and eye pressure will be assessed and you will have pre-procedure drops put into your eye to reduce the risk of a rise in your eye pressure. One of the drops often causes headache/brow ache and blur your vision. However, this is temporary and will wear off after 1-2 hours.

The doctor will explain the treatment to you again and ask you to sign the consent form, to confirm you are happy to go ahead with the procedure. If you have any questions, please speak with the 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 machine. This looks similar to the microscope you will have been examined with in the Eye Clinic. You will then have anaesthetic drops put in, to numb the front of your eye.

To enable the laser to be performed safely, it is very important that you are seated comfortably, with your chin on the chin rest and forehead pressed against the forehead band of the machine. You will be helped to get into this position, if needed.

You will need to stay relaxed and very still during the laser procedure which takes approximately 8-10 minutes per eye.

A special lens with gel on will then be placed on your eye to enable the laser to be focussed on the internal drainage system of your eye (trabecular meshwork). This will not be painful, but you may feel a little pressure.

The laser treatment will then be given. During the laser treatment you might see some flashes of light and hear clicking noises. You should not feel any pain but might feel some slight discomfort. If, however, you do experience any discomfort, please inform the doctor and the laser treatment will be paused.

What happens after the SLT?

Your eye pressure will be checked by the doctor 30-60 minutes after the treatment. If the pressure is not raised you will be able to go home. If your eye pressure is raised, you may need further drops to go home with or treatment to lower the pressure before you go home.

You may be asked by your doctor to stop or continue your current glaucoma drops, depending on your case.

However, if you are on glaucoma drops and not advised to stop your drops, please continue your drops as you were doing before the laser.

We will make a follow-up appointment for you to come back to the Eye Clinic, usually 6 weeks later.

This appointment is to check your eye pressure and that your eye is settling after the treatment.

Signs to look out for

If you have any discomfort when you get home, you may wish to take either paracetamol or ibuprofen. We may prescribe you anti-inflammatory drops for a few days, if we think you might need them.

How to contact the Eye Hospital

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

Tel: **01865 234 567** Select 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 4.00pm 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

Tel: **01865 234 567** option 1

Monday to Friday 8:30am – 4:30pm

Saturday and Sunday 8:30am – 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.

Further information

For more information and further resources please visit the Glaucoma UK website: www.glaucoma.uk

Oxford Eye Hospital – Glaucoma Service

Surgery is performed by the Specialist Glaucoma team.

Lead Glaucoma Consultants:

Mr Rajen Tailor

Mr Guy Mole

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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