NHS
Royal Berkshire
NHS Foundation Trust

Selective laser trabeculoplasty (SLT)

This leaflet provides information about selective laser trabeculoplasty (SLT) and includes risks, benefits and aftercare information. If you have any questions or concerns, please speak to your eye specialist.

Why has SLT been recommended for me?

Glaucoma can sometimes be treated successfully with medications to lower the pressure in the eye. If medications are not effective, laser and other surgical procedures may be of value in controlling the pressure and preventing further vision loss.

SLT is one laser option that can effectively lower eye pressure without the side effects or difficulty of taking eye drops. It can also be used in combination with drug therapy or as an alternative therapy when drugs fail, or when a patient is finding it difficult to cope with or suffering side effects from drops. It is a flexible treatment option and can be repeated, if necessary, depending on the individual patient's response.

SLT is a newer form of a long-established treatment that has the advantage of not causing any damage to the tissue treated.

How does it work?

All treatments are designed to do one of two things:

- Decrease the amount of fluid production in the eye from the cells that make the fluid.
- Help the fluid flow out of the eye.

The trabecular meshwork is around the edge of the iris (coloured disc of the eye), and is the exit channel through which fluid drains out of the eye.

SLT stimulates this meshwork, allowing more fluid drainage from the canals that surround the iris, thus reducing eye pressure.

SLT uses short pulses of relatively low-energy light to target only the melanin-rich cells in the drainage channel of the eye. The laser pulses affect only these melanin-containing cells, with the surrounding structure remaining unaffected. This gentle laser treatment induces a response from the body in which white cells are released to clear the affected cells and rebuild the meshwork so that it functions effectively again, reducing the eye pressure.

What is the success rate?

Studies show a 78% (nearly 8 out of 10) success rate for SLT, with some patients responding well to the treatment, but others not responding at all. Usually, we cannot predict how well the laser will work. It can take a few months for SLT to have its full effect on lowering eye pressure. If successful, the effect may last for a few years. The effects of the laser treatment might wear off in time – about half of all treatments stop working after five years; however, the treatment can be repeated at that stage. If your eye pressure is not at a sufficiently low level after your first laser treatment, SLT may be repeated if necessary, normally at six months or later.

What will happen during the procedure?

The procedure itself is generally painless. It takes place in the Eye Outpatient Department. A doctor will take your written consent and if you have any questions, will explain further. A nurse will check your vision and put some drops in your eye to prevent the pressure rising and perhaps some other drops to make your pupil small. These drops might cause a temporary headache and can take up to one hour to work.

The laser machine looks very similar to the microscope used for examining your eyes. A special contact lens is used to keep your eyelids open. Anaesthetic eye drops are applied to ensure that your eye is comfortable with the lens in your eye. During the laser treatment, you

might see some flashes of light and hear clicking noises. The procedure takes around five minutes per eye. Most patients tolerate the laser treatment well, but some might feel slight discomfort, a little pressure inside the eye or a slight headache during or after the SLT procedure.

What will happen after the procedure?

We check the eye pressure about one hour after the laser treatment. You will be seen again for further eye pressure monitoring within a few months, depending on your eye pressure readings.

If you are using anti-glaucoma eye drops before SLT, the doctor will advise whether you will need to continue these after the treatment, and for how long.

Normally, there is no need for additional drops after SLT, but this will depend on your eye pressure measurements and inflammation following the procedure, or any discomfort you may be feeling. If your eye pressure is high, we may give you a short course of additional pressure lowering eye drops and or tablets; if you have inflammation or discomfort, we may give you anti-inflammatory drops or simple pain relief tablets (e.g. paracetamol).

No aftercare or precautions are needed following SLT; you might experience some eye discomfort and redness, blurry vision or sensitivity to light after the laser for a few hours (or sometimes a few days), for which you might want to wear sunglasses. You are also advised not to drive yourself to the hospital, as **you will be unable to drive home**.

You will be able to resume wearing contact lenses and return to your normal activities from the following day, including driving.

What are the side effects?

The chance of your vision being permanently affected from SLT is extremely small. There have not been any reports of SLT making the vision permanently worse, except in eyes that already had poor vision due to other co-existing eye conditions. If you are concerned that your

vision is not returning to normal, please contact us on the numbers below.

It is possible for the pressure in your eye to increase immediately after the treatment and for there to be inflammation. In order to prevent this, we put in special drops when we treat you.

Contacting us

If you have a minor eye problem, please seek advice from your GP, optician or pharmacist. If urgent, please attend Eye Casualty or call 111.

Eye Casualty (Reading):	Mon-Fri 8am to 5pm; Sat & Sun & bank holidays 8.30am-12.30pm; Closed Christmas Day and New Year's Day.
Eye Casualty: Prince Charles Eye Unit (Windsor):	Mon-Fri 8am to 5pm; Sat 8.30am-12.30pm; Closed Sun & bank holidays.
Greenlands Ward (Reading):	0118 322 7172 (24 hours a day)
Eye Day Unit (Reading):	0118 322 7123 (Mon-Fri 7am to 6pm)

Outside of Eye Casualty hours, you should telephone your GP's out of hours' service, ring NHS 111 or if you have serious concerns, visit your nearest Emergency Department (A&E).

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

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