NHS
Royal Cornwall Hospitals
NHS Trust

Selective laser trabeculoplasty (SLT laser)









One + all | we care

What is SLT laser?

Selective Laser Trabeculoplasty (SLT) is a safe, quick, simple and non-invasive treatment option used to treat glaucoma. It works by reducing the pressure inside the eye. The eye pressure is known as intra-ocular pressure (IOP).
The procedure does not require admission to hospital and is carried out in the Outpatients department.

How does it work?

There are different ways laser treatment can be used to treat patients with glaucoma. SLT uses an advanced laser to target specific cells in the trabecular meshwork (natural drainage channel) of the eye. Short pulses of low energy light are used to target only those cells that contain melanin, a natural pigment. In response the cells are increased to improve the drainage of the fluid in the eye. This in turn lowers the intra-ocular pressure. Some patients can have an early response to the SLT but in most cases it can take up to six weeks for the effects of the laser to be apparent and for your intra-ocular pressure to drop. Please continue to use your eye drops/medications for glaucoma as normal, including on the day of treatment, unless instructed otherwise.

What will happen on the day of treatment?

Expect your visit to take approximately three hours.

- **Before treatment**
  Prior to having SLT you will have your intra-ocular eye pressures checked. An eye drop will be instilled into your eye to prepare it for the laser – this will prevent the intra-ocular pressure rising after the treatment.
- **During treatment**
  Drops will be instilled into your eye to temporarily numb the surface.
  The laser is given through a specially designed microscope. It is very similar to the slit lamp microscope you sit at in clinic to have your eye examined. The doctor will hold a special lens against your numbed eye and gently rotate it during the procedure. You will hear the laser pulses as short clicking sounds and may see bright flashes of light. The entire procedure takes about five to ten minutes. Immediately after the SLT another drop is put in your eye to keep the eye pressure low.

The laser treatment is generally painless – only a few patients experience some discomfort.

- **After treatment**
  You will be asked to wait for 30-60 minutes after having the SLT so that your intra-ocular pressure can be re-checked. You may be given a prescription for anti-inflammatory eye drops to take home. You will also receive an appointment by post for a check up in the Outpatients clinic. There are no activity or work restrictions needed after SLT. However, you are advised not to drive for 4 hours following this treatment because of the effect of the pre-laser eyedrops.

Are there any side effects?

Temporary/short term side effects include:

- **Red eye** – for a few hours after the SLT your eye may feel sore and you may find that the white of your eye appears red. This is due to the lens used on your eye during treatment and should resolve over 24 hours.
- **Blurred vision** – your vision may be blurred for a short time after laser treatment due to the bright light – this will usually resolve within six hours. We therefore advise that you do not drive home following your treatment.
- **Raised intra-ocular pressure (IOP)** – some people's eyes respond to the SLT with a temporary rise or spike in pressure within the first hour following treatment. This is the reason we re-check your eye pressure after SLT, so that we can give you any additional treatment if required. There is a very small risk that your intra-ocular pressure may go up significantly, which may cause a change or reduction in your vision and require additional treatment.
- **Mild inflammation within the eye** – this occurs infrequently and is treated with anti-inflammatory eye drops.

How successful is SLT at lowering eye pressure?

SLT is not recommended for all types of glaucoma and does not work for all patients. Its success can vary on an individual basis – your doctor will discuss this with you. Studies have shown on average a 70% success rate. However, the effects of the laser may wear off over time.

Continued overleaf

About 50% stop working after five years. As the SLT laser does not damage the trabecular meshwork of the eye, the treatment may be repeated.

The information in this leaflet is intended as a guide only as each patient's experience will be different.

Contact us

Contact us or your GP immediately if:

- you have loss of vision, or
- your treated eye becomes increasingly red or painful.

The Eye Unit Nurse: 01872 252324

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

RCHT 1656
© RCHT Design & Publications 2017
Reviewed 03/2022 V3 **Review due 03/2025**