
Our vision: Is for Australians to be free of glaucoma blindness

Selective Laser Trabeculoplasty (SLT)

SLT is a laser procedure used to treat glaucoma and reduce eye (intraocular) pressure by improving fluid outflow through drainage pores located within the trabecular meshwork.

How does it work?

SLT uses short pulses of low-energy light to improve drainage of aqueous fluid in order to lower eye pressure.

In suitable patients it may be used to try and lower the eye pressure without the need for ongoing drops, or as a supplement to existing medications. The aim of the laser treatment is to lower the eye pressure and it does not improve vision. There is a very low complication rate.

Who is it suitable for?

Your eye specialist (ophthalmologist) may recommend SLT as initial treatment:

- If your eye pressure is not adequately controlled with current medication(s).
- If your glaucoma is worsening.
- If you are experiencing problems with your glaucoma medication(s).

What are the benefits?

SLT is considered a safe and effective procedure with few risks. SLT lowers the eye pressure by an average of 25% in 74%-85% of patients treated. The duration of the effect of the laser is variable, with an average benefit of around 3-4 years. One benefit of SLT is that it may be repeated but success with repeat treatments is lower each time.

It may be necessary to supplement SLT with ongoing glaucoma medication. For those who do not respond to SLT, your doctor will discuss alternative treatment options.

Before the procedure

Please take all medication as normal or as instructed. SLT is usually performed under local anaesthetic drops. Although you will be awake, the eye will be numb and you will not feel any pain. The procedure may take less than 5 minutes and is usually performed in your doctor's rooms.

During the procedure

The eye to be treated is anaesthetised with eye drops and a contact lens placed on the eye to precisely focus the laser. The laser is applied to the drainage areas of the eye with typically around 30-60 laser shots per eye at a time. You may see a bright red light and you may feel a mild tingling sensation with each eye laser shot.

The laser does not structurally damage or "burn holes" in the eye; rather it works by causing release of local body chemicals that alter the 'leakiness' of the drainage pores, allowing more fluid out of the eye through natural pathways and thereby decreasing the eye pressure.

After the procedure

After the procedure you may resume normal activities but you should have someone drive you home. Vision may be slightly blurred for a day or so but often is not affected. It is common to have a gritty sensation in the eye for 2-3 days which should resolve. Your doctor will advise about continuing your usual glaucoma medication after the procedure and you may be given mild anti-inflammatory medications.

Your eye pressure will need to be checked to confirm the laser has worked and it may take 4 to 12 weeks to see the full effect of the treatment. Your doctor will discuss when to book your next appointment.

What are the risks?

There can be complications but loss of vision or significant inflammation after SLT is rare. The main risks of the laser procedure are:

- The pressure may rise after the treatment, sometimes requiring additional treatment.
- A second procedure or another type of surgery may be required.
- Patients may experience transient red, uncomfortable eyes or blurred vision that may last a few days.
- If you experience severe pain, sudden loss of vision or discharge, contact your ophthalmologist or the eye hospital/clinic where your procedure was performed.

