

Selective Laser Trabeculoplasty: Commonly asked questions

Selective Laser Trabeculoplasty, or SLT, is a form of laser treatment that is used to lower intraocular pressure. It is used when eye drop medications are not lowering the eye pressure enough or are causing significant side effects. It may sometimes be used as initial treatment in glaucoma.

This leaflet is designed to answer the commonest questions patients ask about this procedure.

1. **Who is a candidate for SLT?**

Patients who have open-angle glaucoma (the drainage system in the front part of the eye is open) and are in need of lowering of their intraocular pressure (IOP) are eligible for the procedure.

2. **How does it work?**

Laser energy is applied to the drainage tissue in the eye. This initiates a biological reaction in the tissue that results in better drainage of fluid through the meshwork. This results in lowering of intraocular pressure by restoring the natural pathway for fluid to drain out of the eye. It may take 1-3 months for the effects to appear.

3. **Why is it called Selective?**

The type of laser used has minimal heat energy absorption because it is only taken up by selected pigmented tissue in the eye. Sometimes it is referred to as a "cold laser." Because of this, the procedure produces less scar tissue and has minimal discomfort.

4. **What are the risks?**

SLT has a favorable side effect profile, even when compared with glaucoma medications. Post-operative inflammation is common but generally mild and resolves spontaneously. There is an approximately 5% incidence of IOP elevation after laser which can be managed by glaucoma medications and usually resolves within 24 hours.

5. **How effective is it?**

SLT is effective in 50 to 60% of patients and if successful can be repeated. SLT lowers the IOP by about 20-30% when used as initial therapy. This is comparable to the IOP lowering of the most powerful and commonly used class of glaucoma drops (prostaglandin analogues). As is the case for eye drop, however, not everyone has a significant response. If SLT is not effective on the first treatment then it will not be successful on subsequent treatments and therefore will not be repeated.

6. How long does the effect last?

The effect will generally last between 1-5 years, and in rare cases, longer than that. If it does not last at least 6-12 months, it is usually not considered successful.

7. What happens if the effect wears off?

If SLT is effective at lowering IOP but this wears off over several years, the procedure can be repeated although the second treatment may not be as effective as the first and may not last as long.

8. What happens if it doesn't work?

If SLT fails to lower the IOP, then the glaucoma is treated by other means such as medications or, if these have been tried, conventional surgery. The laser does not affect the success of these other types of treatment.

9. Will I still need to use glaucoma medications?

Some patients can be controlled with just laser treatment. Others require additional IOP lowering and may therefore need to use glaucoma medication as well. Think of the SLT as equivalent to one glaucoma medication. Just as some patients will require more than one glaucoma medication to control their IOP, some may also require laser plus one or more glaucoma medications. It is important to remember that SLT is not a cure for glaucoma; just as medication and surgery are not.