



GUIDE



Glaucoma Laser Treatments



The Ottawa Hospital | L'Hôpital
d'Ottawa



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Glaucoma is a disease of the optic nerve, often linked to build-up of pressure within the eye. If left untreated, it can result in gradual loss of sight. Eye drops, pills, laser surgery and traditional surgery are used to lower eye pressure and help prevent optic nerve damage and blindness from glaucoma.

Why is laser an option for me?

Laser surgery is an effective and safe treatment to lower eye pressure for patients with glaucoma and is commonly recommended when eye drops are not working well enough. It is often used as an intermediate step between drugs and traditional surgery, although in some patients, it may be recommended as initial therapy. Additional treatment with traditional surgery may be necessary if drops and laser treatment are not successful.

What to expect during laser treatment?

Laser is performed in the outpatient clinic. Before the procedure, anesthetic (numbing) drops will be applied to your eye, which should minimize any discomfort. As you sit facing the laser machine, your doctor may hold a special lens to your eye. A high-intensity beam of light is aimed at the lens and reflected into tissues inside your eye. You may see flashes of bright green or red light. Your doctor will check your eye pressure one hour later before you can go home.

What are the long-term benefits of laser surgery?

Glaucoma laser surgeries help to lower the intraocular pressure (IOP) in the eye or prevent onset of glaucoma. The duration of IOP control depends on many factors. In some cases, the surgery may need to be repeated to better control IOP.

Do I need to use medication following laser surgery?

Like any surgery, laser surgery can occasionally cause side effects (e.g. inflammation). Your doctor may give you some drops to take for any soreness or inflammation inside the eye. In most cases, medications are still necessary to control and maintain eye pressure. However, surgery may lessen the amount of medication needed.

What is my recovery time?

In general, patients can resume normal daily activities the next day. Your eye may be a bit irritated and your vision slightly blurry after the laser, so it is preferable to have somebody drive you home.

What are the different types of lasers available?

1. Laser Trabeculoplasty (LTP):

Laser Trabeculoplasty is commonly used for the treatment of open angle glaucoma. The laser beam

opens up the drainage system of the eye, so that it may work better. Depending on how much pressure lowering is needed, half or all of the drainage system may be treated. There are two types of LTP: Argon (ALT) or Selective laser trabeculoplasty (SLT). Your ophthalmologist will suggest the type of laser that is best suited for your condition. LTP generally lowers eye pressure successfully in up to 85% of patients treated. However, approximately 10% of initially successful treatments may fail with each passing year. In patients in whom the initial LTP was successful, additional laser therapy may be appropriate.

2. Laser Peripheral Iridotomy (LPI)

This type of laser is used for the prevention or treatment of angle-closure glaucoma. In this condition, the iris blocks fluid drainage and thereby increases the inner eye pressure. LPI results in a small drainage hole within the iris that permits the drainage of fluid and thereby helps to lower the eye pressure.

3. Diode Laser Cyclophotocoagulation (Diode CPC)

Diode CPC is typically used later in the treatment plan, when other treatments have failed. This surgery shrinks the ciliary body, the part of the eye that produces fluid within the eye. The procedure may need to be repeated in order to permanently control eye pressure and possibly relieve eye pain.

What are the risks of laser treatment?

Laser surgery carries some risk. Some people (3-5%) experience a short-term increase in their intraocular pressure (IOP) soon after surgery. Others can have some discomfort and inflammation. However, most side effects can be prevented or treated with drops.

Is there an increased risk of cataracts?

There is a small risk of developing cataracts after some types of laser surgery for glaucoma. However, the potential benefits of the laser usually outweigh any risks. It is important to discuss all of your questions or concerns about laser surgery with your eye doctor.

Visit our website : <http://www.eyeinstitute.net>

References:

- American Academy of Ophthalmology
- National Eye Institute (U.S)
- Glaucoma Foundation (New York)
- Glaucoma Research Foundation (San Francisco)

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