What is a Cyclodiode Laser?

The diode laser is a highly concentrated beam of light, which can be used to target and treat a selected area. Sometimes, laser treatment is recommended in order to avoid or delay the need for more invasive surgery. The diode laser is used to produce very small burns in the ciliary body, which produces the watery fluid called aqueous humour, and is situated behind the iris (coloured part of your eye). The reduced production of aqueous humour causes the eye pressure to fall.

What happens on the day of treatment?

The treatment takes place in the operating theatre. You will be asked to attend the hospital in advance of your treatment time. Further instructions will be given by the theatre staff.

The doctor will take your written consent and explain further if you have any questions.
The treatment itself

The procedure may be done whilst you are asleep under general anaesthetic although is commonly done under local anaesthetic. The local anaesthetic involves drops that numb the front surface of your eye and an injection in the skin around your eye, which will make the area around your eye go numb. This may last for a few hours and can affect your vision at the time.

The laser is then applied through the sclera (the white of your eye) using a pen like instrument. At the end of the procedure, an injection of steroid is given to help reduce inflammation that may occur following the laser treatment. An eye pad and a clear plastic shield will be applied over your eye.

It is important that you do not drive, and you may wish to arrange for someone to take you home.

You will be given drops to take at home. You will probably need to continue your glaucoma eye drops (and or tablets). The doctor will advise you of this before you leave. You will receive an appointment to come back to the clinic.
Side effects of this treatment?

Immediately afterwards your eye may look bloodshot. This may result from the injections given to the skin of your eye. Your eye may feel slightly bruised afterwards and sometimes become inflamed. The eye drops will control any inflammation and help to relieve discomfort.

You may wish to take a mild painkiller, for example Paracetamol, to relieve the discomfort. If you are already on painkillers for a different condition continue with these, but do not take both.

Loss of vision may occur after the treatment particularly if the pressure in the eye goes too low although this is rare the doctor will explain this risk in relation to your Glaucoma. Some change in vision is noticed by about 20% of patients.

After treatment – postoperative care

The day of surgery and the next day

You will usually be discharged home from hospital later the same day after surgery. It is usually necessary for the operated eye to be examined again one day after surgery.

The eye is normally patched the first night after surgery and the patch removed the following day. If the un-operated eye does not see well, then the operated eye will not be patched. Instead, a
clear shield will be placed on the operated eye so that you will still be able to see to get around after surgery.

**What should I expect to feel during the postoperative period?**

It is normal for the vision to be blurred and the eye to be uncomfortable after treatment. The period of blurring is variable. The blurring is usually worst for the first 1 to 2 weeks after treatment, and improving slowly afterwards. It takes about 2 months for the eye to feel completely normal and the vision to stabilise. Change in vision can be anticipated.

Soreness in the eye after treatment is partly due to the treatment itself, and partly due to spasm of the eye. This will settle over a few days and the pain can easily be controlled with simple analgesia.

**Eye Drops**

You must continue with the glaucoma medication as prescribed.

The following day, the postoperative eye drops are usually started after removal of the eye patch and cleaning of the eye. The postoperative eye drops will usually consist of an anti-inflammatory steroid (eg. Predforte) eye drops to use for the first two months after treatment. You will be advised if any changes in these are required at each clinic visit.

To start with, the steroid eye drop will be used intensively (every 4 hours or about 6 times daily) during the day.
Postoperative visits to clinic
You will need to be seen on day 1 and one month after the treatment and your glaucoma therapy will be modulated and potentially reduced according to the pressure reduction and target eye pressure during these appointments.

Activity and Instructions of care after Cyclodiode Laser:
Following treatment you are able to read and watch television as normal as these activities will not harm your eye. It is however important to avoid strenuous activity during the first few weeks after surgery. The following table is a general guide to do’s and don’ts.

If anything do not rub/bump/press the eye. In dusty environments please wear eye shield or your own glasses. Do not stop your eye drops unless the doctor advises. Do not use any other products in the eye.

If in doubt please ask your doctor or nurse in clinic.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Advice</th>
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<tbody>
<tr>
<td>Hair Washing</td>
<td>No need to avoid but back wash advised to avoid getting shampoo into your eye. It may be easier to have someone else wash your hair for you.</td>
</tr>
<tr>
<td>Showering / Bathing / Wadhu</td>
<td>No need to avoid but don’t allow soapy/dirty water to go into your eye.</td>
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<tr>
<td>Sleeping</td>
<td>Try to sleep on your un-operated side. Tape the plastic eye shield provided over your eye every night for two weeks to avoid accidentally rubbing your eye whilst asleep.</td>
</tr>
<tr>
<td>Walking</td>
<td>No restrictions</td>
</tr>
<tr>
<td>Wearing glasses / sunglasses</td>
<td>Do not change the prescription of your glasses until the doctor advises. You may wear sunglasses for comfort and UV protection.</td>
</tr>
<tr>
<td>Driving</td>
<td>Your doctor shall advise you. If advised against driving and you continue to do so, this shall be at your own risk.</td>
</tr>
<tr>
<td>Flying</td>
<td>No restrictions</td>
</tr>
<tr>
<td>Going away on holiday</td>
<td>Discuss with your doctor/nurse as it is very important to attend your follow up appointments.</td>
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<tr>
<td>Wearing eye makeup</td>
<td>Avoid for one week then use new makeup. Never share eye make up with anyone else.</td>
</tr>
<tr>
<td>Household chores e.g. cleaning, ironing, hovering</td>
<td>Avoid for 1 – 2 weeks</td>
</tr>
<tr>
<td>Sexual Activity</td>
<td>Avoid for 1 – 2 weeks</td>
</tr>
<tr>
<td>Gym workout</td>
<td>Avoid for 1 – 2 weeks</td>
</tr>
<tr>
<td>Playing any sport</td>
<td>Avoid for 1 – 2 weeks</td>
</tr>
<tr>
<td>Running / jogging</td>
<td>Avoid for 1 – 2 weeks</td>
</tr>
<tr>
<td>Swimming</td>
<td>Avoid for 1 months, after which you must use goggles</td>
</tr>
<tr>
<td>Prayers (Salah)</td>
<td>You may continue prayers but do the rokoo/sajdah in a chair, your head must not go below your heart level. Proceed as normal after one week.</td>
</tr>
</tbody>
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When can I go back to work?

The duration of time off work will depend on a number of factors such as the nature of the patient’s employment, the state of the vision in the other eye, and the intraocular pressure in the operated eye.

Typically someone working in an office environment would require 1 week off, if the postoperative course is smooth. Someone whose occupation requires heavy manual work, or work in a dusty environment will require longer (e.g. builders, working in the desert)

When is the eye back to normal?

It takes 1 to 2 months for the eye to feel completely normal in most cases, and sometimes longer in more complicated cases.
Success rates and complications

Success rates

Over 80% of patients who have their eyes treated by laser in this way have a successful lowering of pressure. The effect of the laser can wear off in time but may last for months or years. The treatment can be repeated if necessary.

Complications

As with any treatment, there is a potential for complication or problems to arise. Complications can occur during the treatment, shortly after the treatment or many months after treatment.

Severe complications are rare and may happen either if the eye pressure drops very low, or very quickly during the early postoperative period, or if the eye becomes infected.

Bleeding

The most serious problem that can occur is bleeding inside the eye. This can lead to loss of vision and even blindness but occurs in less than 1 in 1000 patients. There are measures taken to prevent this but this is not a predictable complication.
Infection
An infection inside the eye can be very serious and also cause loss of vision or blindness. This also happens in less than 1 in 1000 patients. Measures are taken and aseptic techniques used to prevent this complication.

Pressure
After the operation the eye pressure may be too high or too low. This may require additional treatment in the outpatient clinic or sometimes further surgery is required.

Pain/Red eye/Inflammation
This can occur frequently and is usually treated with eye drops with quick resolution.

Loss of vision (5-6% risk of complete loss)
Although this may occur it must be balanced with the 99.9% risk of loss of vision due to high pressure and sometimes loss of vision is not an issue in cases where the eye is already blind and needs to be made more comfortable by reducing the pressure.

What if I don’t have the operation?
The advice that has been given to you by the Glaucoma specialist is based on the balance of risk and benefits. If a treatment has been recommended then the benefits outweigh the above risks of this treatment.
If the operation is not performed in a timely manner then there is potential for further irreversible visual loss. This could be due to high pressure and / or fluctuating pressure in the eye leading to blindness or a painful eye.

However the informed decision rests with the patient. Your Glaucoma specialist will be available and happy to discuss your concerns and expectations before proceeding with surgery.

Disclaimer

Accuracy

While every step has been taken to compile accurate information and to keep it up to date, we cannot guarantee its correctness and completeness.

The information provided in this information sheet is designed as an adjunct to, and not a substitute for professional healthcare advice, by a qualified doctor or other healthcare professional, which will be tailored to a patient’s individual circumstances.

Dr Sohaib Mustafa and Moorfields Eye Hospital Dubai cannot take responsibility if you rely solely on the information in this information sheet.
How To Reach Us

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Opening hours:
Saturday to Thursday, 8.00am to 6.00pm, for information and advice on eye conditions and treatments from experienced ophthalmic-trained staff.