

Patient information

Argon Laser Photocoagulation for Retinal Vascular Conditions

Ophthalmology Department - Aintree Hospital

Introduction

Argon laser is used to prevent leakage of fluid from blood vessels at the back of the eye (the retina) or to prevent the development of abnormal blood vessels in the eye.

These problems may be related to diabetes or may be caused by other conditions affecting the blood vessels on the retina.

You might be offered a focal/ macular laser or a pan retinal laser (PRP) depending on your condition

Focal / grid laser treatment

Here the laser is targeted towards the leaking area to reduce leakage of fluid from leaky blood vessels in the retina. You may require more than one treatment.

Pan retinal laser treatment (PRP)

Your condition

Your eye disease has now progressed to a stage that the retina has sensed a lack of oxygen and started to/potentially likely to develop new blood vessels on its surface.

This unfortunately isn't good news, as these new vessels serve no useful purpose. Being fragile, they rupture- and bleed inside the eye. This might cause a sudden loss of vision.

Should the new vessels grow on the surface of the iris (the coloured part of the eye) they can block the drainage of fluid out of the eye and can cause the pressure inside to build up to high levels fairly quickly. This can lead to painful blind eye.

Laser treatment is done to help get rid of these vessels. The treatment is generally performed over one to three sittings.

This is used to treat parts of the retina which are producing substances which encourage the development of abnormal blood vessels on the retina or iris.

The problem with the abnormal blood vessels is that they are prone to bleed, causing potentially devastating visual complications. The treatment takes longer than focal treatment because more laser shots are applied to the retina.

Argon Laser Treatment - how is it done?

Please do not drive to the hospital for your appointment or for the rest of the day, as your vision might be blurry.

- You will have dilating drops put into the eye to enlarge the pupil that can take between 30 to 60 minutes for maximum effect.
- You will then have some local anesthetic drops put to numb the surface of the eye
- The doctor will ask you to sit at the laser machine and to put your chin on the rest.
- A lens will be placed on the eye to allow the doctor to focus the laser on the retina.
- You will then hear some clicks of the machine firing and see some bright flashes of light.

- It is important to keep the eye as still as possible, to keep the eyes open and not to squeeze the eyes closed.
- Your doctor will be able to help you with this by using the lens.
- This procedure can take between 15-45 minutes.

Post Argon Laser Treatment

- Your vision may be blurred for a few hours after the procedure partly because the pupil will remain dilated for this time and partly because of the bright light used in the procedure.
- You may experience brief discomfort or tenderness of the eyes during and post procedure.
- Pain is unusual but can be dealt with a mild pain killer like paracetamol.
- You will not be able to drive home following treatment due to the eye drops used that will temporarily dilate your pupils and blur your vision. It is ideal to bring a relative/friend with you if possible.
- It is preferable to avoid heavy lifting for 48 hours after laser treatment.

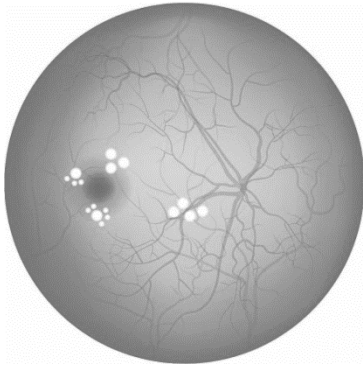
Vision after Argon Laser Treatment

- Your vision may gradually improve over a few weeks; it may stay the same and rarely get worse.
- The improvement is usually slow and may take weeks for you to notice.
- If the treatment has been used to prevent bleeding from abnormal blood vessels, you are unlikely to notice any change in your vision.
- If you experience severe floaters and flashing lights or loss of vision please contact us as soon as possible.

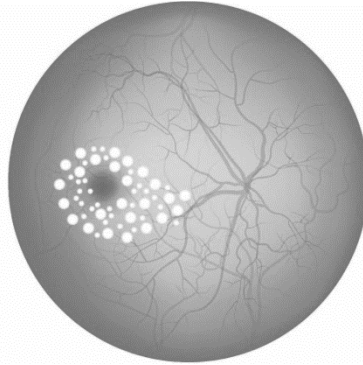
Alternative treatment options

Injection of steroids, steroid implants and Anti-VEGF agents into the eye are alternative options for management.

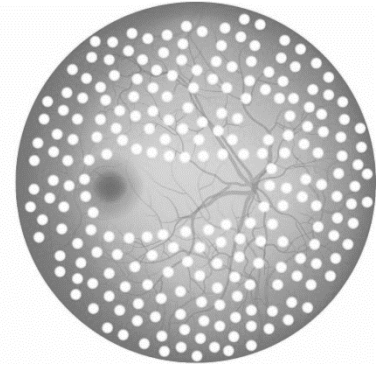
This can be discussed with your doctor to find if you are a suitable candidate for them



Facal treatment is used to treat **macular edema due to focal leakage.**



Grid treatment is used to treat **macular edema due to diffuse leakage.**



Panretinal treatment may be used to treat **pre-proliferative and proliferative retinopathy**

Risks

Although proven safe, like any other surgical procedure, retinal photocoagulation may occasionally be associated with complications.

Reduced vision (focal)

- Laser treatment can cause deterioration in central vision, which is usually transient. A transient blur following PRP is not uncommon – either due to transient myopia(short sightedness) or increased fluid at the back of the eye
- If the leaking areas are too close to the central part of the vision, there is a risk of reduced vision

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- Very rarely the burn might hit the fovea which can lead to permanent blind spot or central visual loss

Colour vision and visual field changes (PRP)

- This treatment reduces your visual field (side vision/peripheral vision). This can affect your fitness to drive. You are obliged to inform the DVLA, especially if you have this treatment in both eyes .
- It can impair your night vision and you may take longer to adapt in darkness. Again this has implications for you driving at night. You are expected to use your judgement in these circumstances.
- Colour vision may be affected

When can I return to work?

You may return to work the next day.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further Information

**Department of Ophthalmology
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**Ophthalmology Clinic:
Tel: 0151 529 0185**

RNIB Understanding Eye Conditions relating to Diabetes:
(Nov 2009 ISBN 978 1 85878 697 1)

The Macular Disease Society:
www.maculardisease.org
Helpline: 0845 241 2041

Royal College of Ophthalmologists:
www.rcophth.ac.uk

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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