

# Panretinal photocoagulation (PRP) laser

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## What is Panretinal Photocoagulation laser?

Panretinal Photocoagulation (PRP) is a type of laser for the eye. It is used in people who have developed new abnormal blood vessels at the back of the eye in the retina or in the drainage system within the eyeball e.g. diabetes or vein occlusions.

Retinal holes or tears can sometimes be treated with this laser reducing the need for surgical intervention.

## Why do I need Panretinal Photocoagulation laser?

The PRP laser treatment prevents abnormal new vessels on the retina and in the drainage system of the eyeball from growing and encourages existing ones to shrink and scar up. This makes them less likely to bleed into the jelly in the eyeball (vitreous haemorrhage) or to cause a painful type of high pressure within the eye (neovascular glaucoma).

Without this treatment there would be a risk of either losing sight in the eye due to a bleed into the jelly of the eye or of the development of a retinal detachment for patients with new blood vessels which have grown into the retina due to either diabetic related problems (proliferative diabetic retinopathy) or a blocked branch vein (branch retinal vein occlusion).

Patients, who have developed new blood vessels in the coloured part of the eye (iris) due to a central blocked vein in the eye, would have a risk of developing a painful eye due to the new vessels blocking the drainage system in the eye.

In this case the aim of the treatment is to prevent the eye becoming painful through a buildup of fluid causing the pressure to rise. The vision would already be poor and no improvement would be expected.

The risk of occurrence of the above conditions can be reduced by keeping good control of your diabetes, and monitoring your blood pressure reporting rises in sugar or blood pressure level to your GP.

## How long will I be at the department?

The treatment may only last for 15-30 minutes but please be prepared to be at the department for about 1.5 hours.

## What will happen?

This treatment will be carried out in the Exmoor unit at NDDH. Please report to Exmoor unit reception on arrival.

A nurse will check your vision and instill some eye drops to dilate the pupil. These drops will blur your vision for 4-6 hours and allow the doctor to view the back of the eye during the laser treatment. **DO NOT DRIVE.**

You will be asked to sign a consent form for the treatment and specific risks to your eye condition will be discussed with you.

PRP laser involves applying many laser burns to the retina (lining at the back of the eye). It is often done over a number of sessions.

A local anaesthetic drop will be used prior to the laser treatment.

The laser is applied using a microscope with a chin rest and a special contact lens placed on the eye.

The treatment usually takes 15-30 minutes depending on how much treatment is required in your particular case.

## What will happen afterwards?

Following the treatment you can go home. You may notice discomfort or a dull ache in the eye after the treatment. Simple painkillers (Paracetamol) may be taken to help this.

Your vision will be “dazzled” or may seem darker after the treatment. This effect can last for 24-48 hours.

You should avoid driving for 24 hours after the treatment.

## Possible benefits of having laser treatment?

It reduces new blood vessel formation at the back of the eye, which will prevent further bleeding and loss of vision. Without PRP over 50% of patients with new vessels due to diabetes lost the sight in that eye.

It also reduces retinal leaking (oedema) due to damaged blood vessels which causes visual loss.

## What is the prognosis or expected outcome of treatment?

There is good scientific evidence that laser treatment will significantly reduce the risk of your vision deteriorating. It also reduces the risk of the eye developing painful high pressure.

## Are there any possible complications?

The laser treatment can reduce the peripheral (edge) field of vision. You may not notice the effect of this. However it might mean you will not meet the visual legal requirement for holding a driving license, particularly if both eyes need treatment. Ask the doctor about this if you are a driver.

Your night vision may be reduced and your colour vision altered in the eye having the treatment.

Rarely your vision may be worse after the treatment. This can be caused by a buildup of fluid at the back of the eye (macula oedema), bleeding within the eye (vitreous Haemorrhage) or extremely rarely an unintended burn to the center of the retina. This deterioration of vision may be permanent.

If you are concerned about any of these risks, or have any further queries, please speak to the consultant.

## Follow up

A follow up appointment will be arranged for either a further session of PRP laser, or a follow up to check that the eye is responding to the treatment. This varies depending on the reason you are having the laser.

## Further information

If you have any questions or concerns please ask any member of the medical or nursing team or contact the eye clinic, Monday to Thursday 9am to 5pm, Friday 9am to 1pm.

Tel: 01271 322647

The Royal National Institute of Blind People. (RNIB) Find out more at [www.rnib.org.uk](http://www.rnib.org.uk) or phone the RNIB Helpline on 03031239999

The NHS Choices website. Find out more at <https://www.nhs.uk/>

## References

<https://www.hey.nhs.uk/patient-leaflet/panretinal-photocoagulation-laser-prp/>

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## PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email [rduh.pals-northern@nhs.net](mailto:rduh.pals-northern@nhs.net). You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

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