



Retinal laser

The 2 types of laser that are applied to the retina are Pan-Retinal Photocoagulation and Macular Laser:

Pan-Retinal Photocoagulation (PRP)

PRP laser is applied when there is a growth of abnormal blood vessels in the retina, which can occur due to an impairment in the blood supply to retina in conditions such as severe diabetic retinopathy or following retinal vein occlusion. The laser causes shrinkage of the abnormal blood vessels, thereby reducing the risk of them bleeding and causing loss of vision.

How is PRP laser given?

- The treatment is carried out in the outpatient clinic, using a laser machine similar to the slit-lamp that is used to examine patients' eyes.
- A drop of local anaesthetic is applied and a contact lens is placed on the eye to help the doctor focus accurately on the retina.
- As the laser is applied, you will see many bright flashes of light. The treatment is not painful but some patients report occasional discomfort lasting for a second or two.
- The treatment usually takes about 10 minutes to complete, after which your vision will be dazzled for an hour and no special precautions need to be taken after the laser treatment.
- Sometimes laser treatment needs to be given over several sessions if a lot of laser treatment is required.
- It usually takes about 4-6 weeks to assess the response to laser treatment, and further laser therapy may be required.

What are the risks of PRP laser?

PRP laser is extremely safe and if not applied, there is normally a certain risk of loss of vision due to bleeding from untreated abnormal retinal blood vessels. The small risks of complication include:

- If a lot of PRP laser needs to be applied, this may cause a reduction in your peripheral vision, which in severe cases affect your eligibility to drive.
- Laser can occasionally cause some inflammation in the eye which leads to mild scar formation or swelling in the central retina that can affect vision.
- In very rare cases, the laser can cause bleeding from beneath the retina that can affect the vision.
- Looking directly at the laser beam as the laser is applied can cause damage to the retina, but this is very unlikely.

Macular Laser

This is used when there is fluid from leakage of tiny blood vessels in the macula region of the retina. As the macula is the part of the retina that is responsible for detailed vision, any fluid that leaks into this area can lead to a loss of vision – such as in Diabetic Macular Oedema and Branch Retinal Vein Occlusion.

How is Macular Laser given?

The procedure for Macular Laser is similar to that for PRP, except a different contact lens is applied that provides the doctor with a highly magnified view of the macula. Also, a few number of laser spots are needed, using a lower laser intensity.

It usually takes about 3 months to assess the response to laser treatment, and further laser therapy may be required.

What are the risks of Macular Laser?

Macular Laser is generally a very safe procedure. The risks of a serious complication are small and include:

- The laser being applied to the very centre of the macula, which can affect vision.
- Scar formation from the laser affecting the vision.