

# PRP Laser Treatment: A Quick Guide

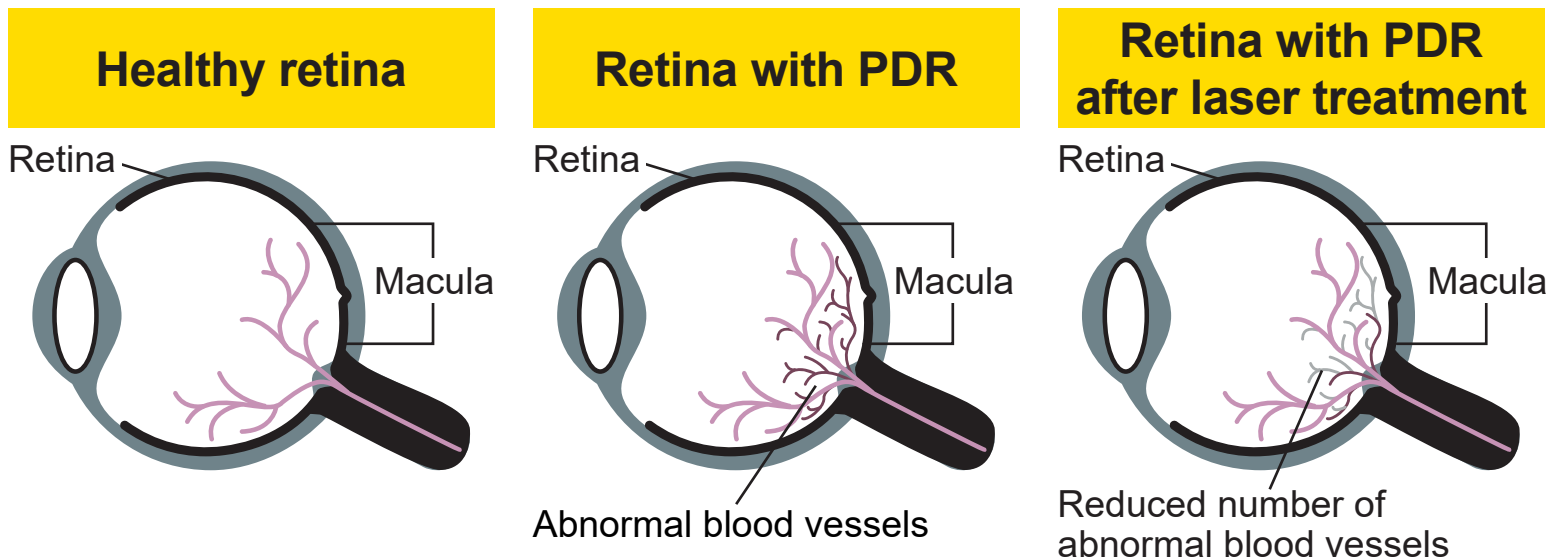
**Pan-Retinal Photocoagulation (PRP) laser treatment** is a medical procedure for people with proliferative diabetic retinopathy.<sup>1</sup> Unlike laser treatments used for correcting vision, such as LASIK, PRP laser is used to stabilize vision and **prevent the progression** of diabetic eye disease.<sup>2</sup>

## What is proliferative diabetic retinopathy (PDR)?

- **Advanced** form of diabetic retinopathy
- New abnormal blood vessels start to proliferate (grow) to make up for the poor blood flow in your retina (a layer in the back of your eye vital to maintaining vision) caused by your diabetes<sup>3</sup>
- The new blood vessels are fragile and can cause vitreous hemorrhage (bleeding in the eye) or retinal detachment (the retina is pulled away from its normal position)<sup>4</sup>

## How does PRP laser treatment help with PDR?

PRP laser is the main treatment for PDR, used to alter the abnormal blood vessels in the peripheral (outer) parts of the retina.<sup>1</sup> This allows more oxygen to get to the macula, the centre of the retina that allows you to see things right in front of you like faces or text.<sup>4</sup>



**Evidence shows that PRP laser treatment reduces the risk of severe vision loss by 50% or more for people with PDR.<sup>5</sup>**

## What happens during PRP laser treatment?

Your eye doctor will perform PRP laser treatment in a clinic or hospital. It usually takes anywhere from 5-30 minutes and is often completed over the course of several sessions.<sup>2</sup> At the treatment:



Eye drops will be used to dilate your pupil to see your eye more clearly. You will also receive drops to numb your eye.<sup>2</sup>



You will be either:

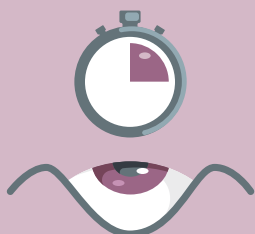
- Seated with your chin in a chin rest. A special contact lens will be placed in your eye to help the doctor focus the laser.<sup>6</sup>
- Lying flat on a chair or bed. Your doctor will use a headpiece to deliver the laser.<sup>1</sup>



You will look straight ahead or at a target light with your other eye. Your doctor will aim the laser at the part of the eye needing treatment. You will see a flash of light.<sup>6</sup>



You may experience discomfort or mild pain during the treatment. You can ask your doctor about taking ibuprofen or acetaminophen (Advil® or Tylenol®) before or after the procedure if you are concerned about pain.<sup>2</sup>



Your vision may be different for several minutes after the treatment and you may see different colours, such as pink and purple hues.<sup>4</sup> Afterwards, your vision will return to the same as it was prior to the laser treatment.<sup>6</sup>

**Your doctor is the best source of advice on your treatment options, and on what to expect at your treatment visit.**

## **How many laser sessions will I need?**

Multiple laser sessions are usually needed.<sup>2</sup> Your eye doctor will advise you on the number of follow-up laser appointments you may need.

## **Here are a few tips to help you prepare for your treatment:**



You are welcome to bring someone with you for support.



Have a plan for a ride home, as you may not feel comfortable driving after treatment.



Bring sunglasses in case your eyes are sensitive to light after the treatment.

## **Are there any risks with PRP laser?**

As with any eye treatment, there are possible risks. The main ones are:

- Reduced night vision
- Reduced peripheral (side) vision
- Reduced colour vision
- Mild headache<sup>1,7</sup>



**Remember: Diabetic retinopathy can get worse over time, so it is important to attend all of your eye doctor appointments to ensure you are closely monitoring your eye health.<sup>5</sup>**

## Frequently asked questions

### How much time will I need to recover from the PRP laser treatment?

You can go home after the treatment and you should be able to resume your normal activities the next day.<sup>1,2</sup>

### Will I need an eye patch?

No, you will not need to wear an eye patch unless your doctor advises you to.

### How long will my vision be affected after treatment?

Typically, you won't be able to see for a few minutes after treatment. After that, you may notice slight changes in your ability to see colour, and at night.<sup>7</sup> These changes usually get better.<sup>1</sup> Contact your doctor right away if you experience significant pain or changes to your vision that do not go away.

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1. "Panretinal Photocoagulation", American Academy of Ophthalmology, last modified June 17, 2023, [https://eyewiki.aao.org/Panretinal\\_Photocoagulation](https://eyewiki.aao.org/Panretinal_Photocoagulation)
  2. "Panretinal Photocoagulation Laser (PRP)", National Health Service, last modified September 30, 2019, <https://www.hey.nhs.uk/patient-leaflet/panretinal-photocoagulation-laser-prp/>
  3. "Diabetic Retinopathy", Fighting Blindness Canada, last modified October 27, 2020, <https://www.fightingblindness.ca/eyehealth/eye-diseases/diabetic-retinopathy/>
  4. "Panretinal Photocoagulation Laser (PRP)", Waterloo Regional Eye Program, accessed June 30, 2023, <https://www.waterlooeeye.ca/procedures/panretinal-photocoagulation-laser-prp>
  5. Royle P., Mistry H., Auguste P., *et al.* Pan-retinal photocoagulation and other forms of laser treatment and drug therapies for non-proliferative diabetic retinopathy: systematic review and economic evaluation. *Health Technol Assess.* 2015;19(51):v-247. doi:10.3310/hta19510
  6. "Laser Photocoagulation – Eye", Mount Sinai, last modified February 17, 2022, <https://www.mountsinai.org/health-library/surgery/laser-photocoagulation-eye>
  7. "Pan-retinal Photocoagulation", Eye Physicians and Surgeons of Ontario, accessed June 30, 2023, <https://www.epso.ca/vision-health/eye-conditions/retinal-diseases/diabetic-retinopathy/diabetic-retinopathy-treatments/pan-retinal-photocoagulation/>

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