

Proliferative Diabetic Retinopathy



PATIENT EDUCATION



Dr. Anil Kulkarni Eye Hospital



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What is Proliferative Diabetic Retinopathy (PDR)

PDR is an advanced form of diabetic retinopathy that can be caused by either type 1 or type 2 diabetes mellitus. Retinopathy occurs when diabetes damages the tiny blood vessels in the retina. The weakened blood vessels may leak fluid and blood. It can lead to blindness if not diagnosed and treated at the right time

Who are at risk for developing PDR?

Those with poorly controlled blood sugar levels are at a high risk of developing diabetic retinopathy. In addition, high blood pressure, high cholesterol, anemia, kidney disease and pregnancy can all place a patient at greater risk of suffering from diabetic eye disease.

What are the symptoms of PDR?

There may be no symptoms in the early stages, especially when the central portion of the retina is not involved. As the retinopathy progresses, you may have:

- Blurred vision
- Floaters, which can look like black spots, little threads, or cobwebs
- Bleeding in the eye causing sudden loss of vision
- Temporary or permanent loss of vision.
- Pain is not a common feature of the disease. It may occur in the end stage disease

How is PDR detected?

PDR is detected during a comprehensive dilated eye exam that includes vision testing and a fundus examination.

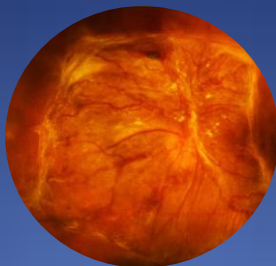


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- **Dilated retina examination:** Putting drops in your eyes to widen and dilate pupils to see the back of the back. Vision may remain blurry for the 4-5 hours on that day. The dilatation takes 30-45 minutes.



A comprehensive dilated eye exam allows the doctor to check the retina for:

Changes to blood vessels

Leaking blood vessels or warning signs of leaky blood vessels, such as fatty deposits

Swelling of the macula (DME)

Damage to nerve tissue

Additional tests:

- **Fundus fluorescein angiogram(FFA)** It is done to detect early PDR is suspected. In this test, a fluorescent dye is injected into the bloodstream, often into an arm vein. Pictures of the retinal blood vessels are taken as the dye reaches the eye.
- **OCT:** This test scans the retina using light waves and achieves very high-resolution images of retina. The light beam is painless.

Laser Treatment: The abnormal new blood vessels of PDR are treated with laser photocoagulation or PRP. During this procedure, the peripheral retina, which is not receiving adequate blood flow, is treated, in order to stop the development of abnormal blood vessels.

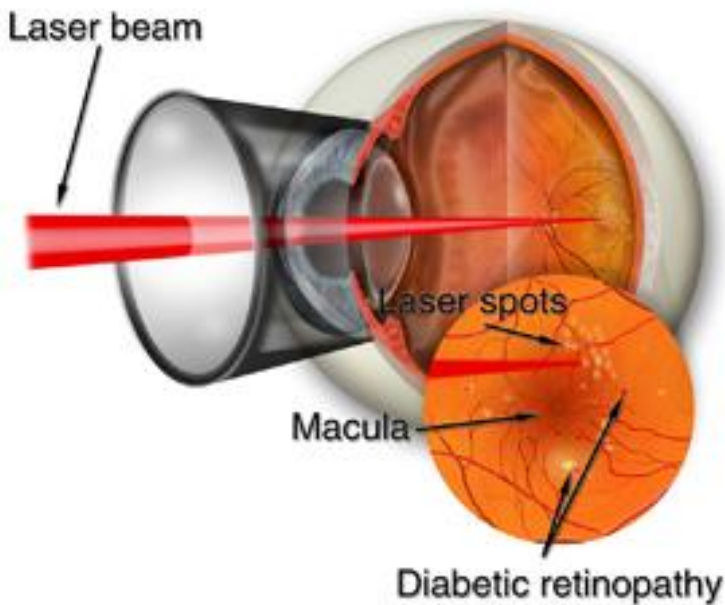


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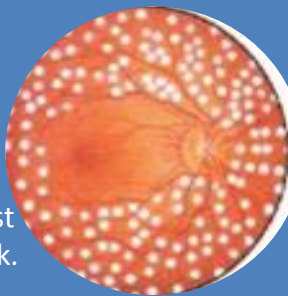


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How is PDR treated?



This treatment is divided into 3 – 4 sittings, with a gap of 7 – 10 days between each sitting. Treatment stops the formation of new abnormal blood vessels and in most cases causes existing ones to shrink.



Some patients experience blurry vision, which can be temporary or continue indefinitely. Regardless of these side effects, PRP has been shown to decrease the risk of vision loss.



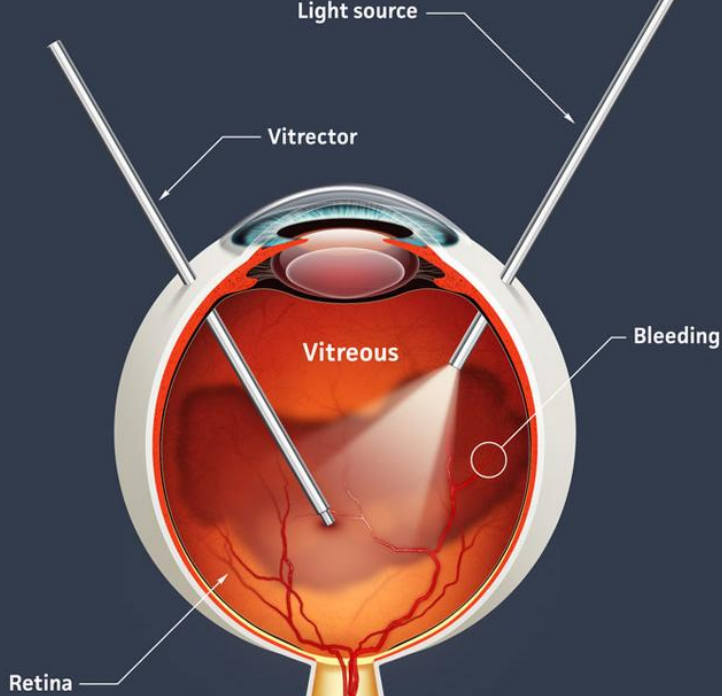
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- **Vitrectomy Surgery:** Some patients may experience bleeding (vitreous hemorrhage), which makes it impossible for the laser to be delivered to the back of the eye. In most cases the blood clears up on its own. If it does not clear up after 6 weeks, a vitrectomy may be necessary.
- A vitrectomy may also be needed if tractional retinal detachment occurs. In this case, the surgery is performed to stabilize vision and reduce the risk of vision getting worse.
- A vitrectomy is a common retinal surgery. During the surgery, vitreous gel is removed using tiny instruments. The surgery is performed in a hospital setting, but on an outpatient basis.
- If scar tissue has built up on the retina, tiny instruments are utilized to remove the scar tissue. Laser is typically applied to the periphery of the retina during surgery.

