

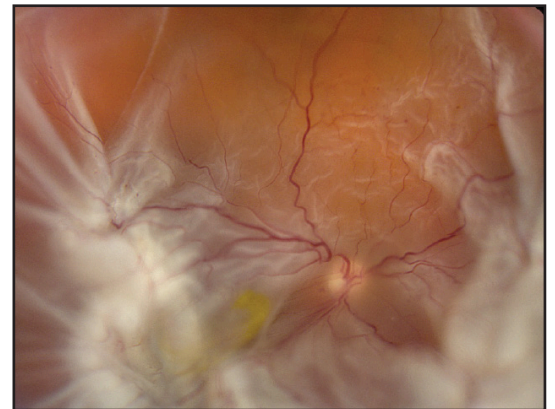


Proliferative Vitreoretinopathy

Proliferative Vitreoretinopathy (PVR) is a type of scar tissue that can grow after a retinal detachment and it is the most frequent cause for failure of retinal detachment repair. Sometimes PVR grows after an initial successful retinal detachment repair surgery and causes redetachment of the retina, and sometimes PVR is already present and complicates the initial surgical repair. PVR is frustrating for patients and surgeons alike, and requires additional surgical maneuvers to treat successfully.

WHY DOES PVR OCCUR?

When the retina detaches, inflammatory signals may be released in the eye. Those signals can cause the growth of cellular membranes on the front or back surface of the retina, or they can cause the retina to stiffen or tighten. PVR is more common if there are multiple retinal tears, large retinal tears, a large area of retinal detachment, or if the detachment has been present for a long time. In addition, every patient's body is different, and some individuals show rapid PVR responses while others do not. Doctors and scientists have been searching for decades for ways to prevent PVR, and to date no reliable method for PVR prevention has been identified.



HOW IS A RETINAL DETACHMENT WITH PVR DIFFERENT FROM ONE WITHOUT PVR?

Without PVR, a retinal detachment typically occurs because fluid travels through a retinal tear or hole into the space behind the retina, and the retina comes off the wall of the eye like wet wallpaper. Surgical repair involves flattening the retina and gluing the edges of the tear to the wall of the eye using laser or freezing treatments and often supporting the retina with a gas bubble.

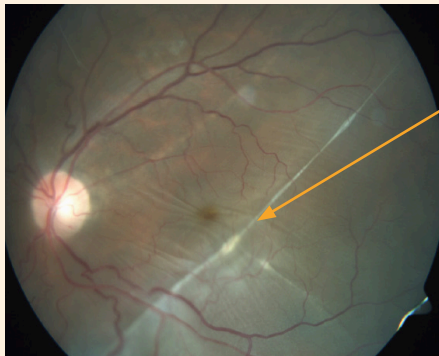
By contrast, PVR physically contracts the retina so that it cannot lay flat against the wall of the eye unless the membranes are mechanically removed, and the retina must often be surgically trimmed or relaxed in order to allow the tissue to lay flat. The retina is then flattened and lasered, and a bubble is placed in the eye. Most of the time, a bubble of silicone oil is used in PVR surgeries because the oil bubble supports the retina until it is removed in a separate surgery, and because silicone oil can help to suppress the growth of more PVR scar tissue. In some severe cases, silicone oil is left in the eye long term due to the high risk of retinal redetachment if the oil is removed.

SUCCESS RATE

The success rate of PVR surgical repair is lower than the 90% or higher success rate of retinal detachment repair without PVR and is usually in the 70-80% range but varies depending on the specific characteristics in each case. Ask your BARA surgeon about the characteristics of your detachment that may influence the success rate. Because immature PVR may not be visible, and because PVR can continue to grow regardless of the surgical approach, recurrence of PVR is often the number one concern after surgical repair of a retinal detachment with PVR; your BARA surgeon will monitor your eye carefully for visible recurrence of PVR at your post-operative visits.

PROGNOSIS FOR VISION

Vision after retinal detachment repair in general can vary depending on the degree to which the center of the retina was damaged by the detachment but also other factors. In cases of PVR, the long term vision is generally not as good as in cases without PVR. Sometimes changes in vision are due to cataract development, which can be addressed with cataract surgery, but most cases of PVR have some degree of permanent damage to the retina which limits the quality of the vision. Recovery after PVR repair can be slow, particularly in cases with multiple surgeries and silicone oil in the eye.



Subretinal PVR band

In cases of PVR surgical repair, your BARA surgeon will divide or remove bands or sheets of PVR scar tissue from the front surface and/or underside of the retina in order to allow the retina to reattach.



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Bay Area Retina Associates is a group practice of retinal surgeons. All members of the group are board-certified by the American Board of Ophthalmology and have completed fellowship training in the medical and surgical care of retinal diseases. All BARA surgeons have expertise in the treatment of common diseases such as age-related macular degeneration, diabetic retinopathy and retinal detachment, as well as rare diseases. We have served the Bay Area community for 35 years.