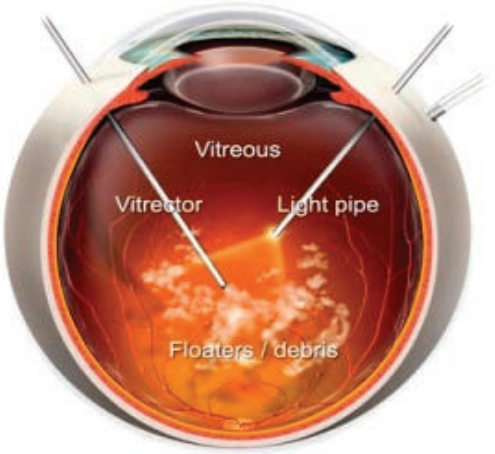
Pars Plana Vitrectomy



Vitrectomy is recommended if you have very advanced proliferative diabetic retinopathy, vitreous hemorrhage that won't clear on its own, or retinal detachment. During a vitrectomy, the surgeon removes the blood-filled vitreous and replaces it with clear salt water, clearing the way for additional laser treatment. A vitrectomy is performed in the hospital or outpatient surgery center with anesthesia. The surgeon will use a special microscope to look into your eye, and will perform the procedure using microsurgical instruments.

www.retinalmd.com

Office Locations:

Chico
Elk Grove
Grass Valley
Modesto
Roseville
Sacramento
J Street & Greenback
Stockton
Tracy
Vacaville

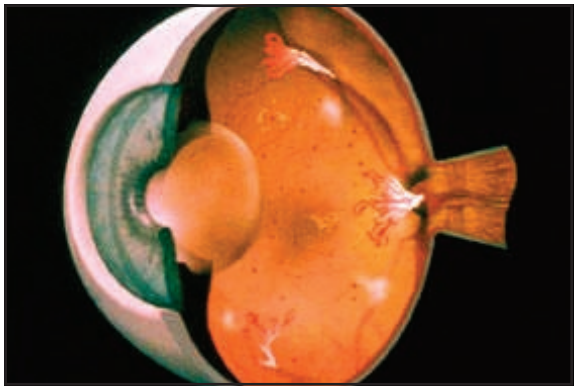
Margaret Chang, MD, MS
David Cupp, MD
Robert A. Equi, MD
Arun C. Patel, MD
Joel Pearlman, MD, PhD
J. Brian Reed, MD
David Telander, MD, PhD
Tony Tsai, MD
Robert T. Wendel, MD

Main Number
916/454-4861

J HH08

Retinal Consultants

Proliferative Diabetic Retinopathy

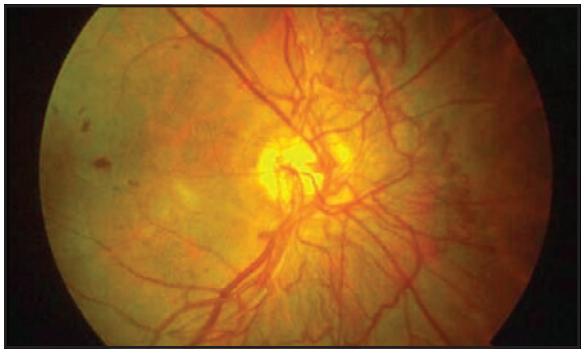


Peerless Experience . . .

Uncompromising Care . . .

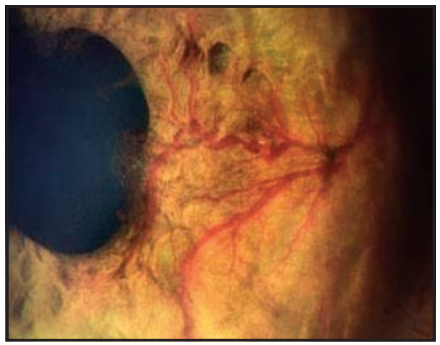
Retinal Consultants

What is Proliferative Diabetic Retinopathy (PDR)? The hallmark of this stage of diabetic retinopathy is the development of abnormal retinal blood vessels, a process termed neovascularization. In chronic diabetes, the smaller blood vessels tend to clot off over time, leading to the growth of new vessels that proliferate on the surface of the retina. Unfortunately, these new vessels are fragile and bleed easily.



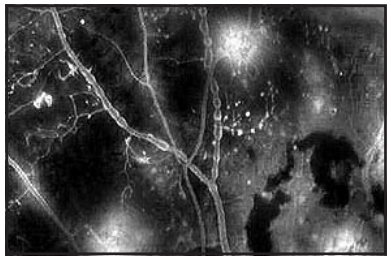
In proliferative diabetic retinopathy (PDR), abnormally fragile vessels grow in irregular sheets across the back of the eye. They bleed easily and encourage the development of scar tissue.

Notice the blood vessels growing across the iris and into the pupil. Neovascularization in this part of the eye is extremely dangerous.

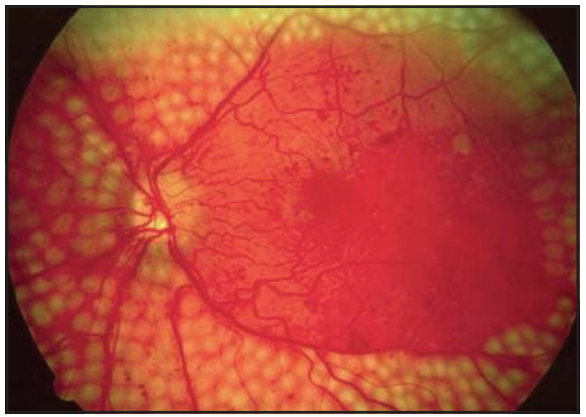


How do these abnormal blood vessels cause eye damage? Neovascular vessels (NV) can bleed abruptly into the middle of the eye, causing a vitreous hemorrhage. Additionally, neovascularization produces scar tissue, which can pull the retina off the interior wall of the eye, creating a situation known as a tractional retinal detachment. New blood vessels may grow on the iris, or the colored part of the front of the eye leading to a painful and blinding rise in eye pressure known as neovascular glaucoma.

How is the diagnosis of PDR made? The first step is a careful eye exam where both pupils are dilated. If new blood vessel growth is suspected, you may need a fluorescein angiogram. This is a photographic study of the back of the eye while a safe orange colored dye is injected in a vein of the arm. The dye circulates through the body into the eye to highlight abnormal vessels, or where treatment is needed. If the eye is too filled with blood to examine, your doctor can perform a quick and painless ultrasound evaluation of the eye's internal structure.



Right: A fluorescein angiogram demonstrating blocked and abnormal retinal blood vessels, as well as areas of neovascular vessels that are leaking (white, cloud-like areas).



Above: A recently laser treated eye

How is PDR treated? Laser Photocoagulation is one of the most common treatments for diabetic retinopathy. In this kind of surgery, brief spots of bright light are scattered through the sides of the retina to reduce abnormal blood vessel growth and help seal the retina to the back of the eye. It is a proven way to prevent bleeding and retinal detachment. Laser surgery may need to be repeated several times.

Right: An ultrasound of the eye depicting vitreous blood