

Diabetic Retinopathy II

By Robert L. Epstein, MD

In a previous article, diabetic retinopathy was explained to be the result of breakdown of capillaries, then the swelling, leaking and circulation stoppage, then the complications of weak and bleeding blood vessels and clogging of critical areas in the eye from the body's attempted repair. Remember that keeping a "close eye" on your health by tight blood sugar control (hemoglobin A1C at 6.0 %) by oral medications, multiple dose insulin or an insulin pump, controlling cholesterol and blood pressure, not smoking, and getting expert eye exams at correct intervals can do much to gain the very best possible outcomes.

Your ophthalmologist has many diagnostic and treatment options for diabetic retinopathy. To diagnose and manage the condition, a periodic thorough, pupil-dilated exam is the start. An office-based test called fluorescein angiography creates a details map of the circulation of the retina that can help detect subtle areas of blood damage that might not be visible otherwise.

If the leaky capillaries of non-proliferative diabetic retinopathy cause swelling too close to the fovea, the center of sharp vision, then your ophthalmologist may perform laser treatment to stop the leaks. Usually completed in a single office visit, the doctor placed numbing eye drops on the eye, places a special lens onto the eye for treatment, and then applies up to several hundred tiny laser burns to the leaking areas of the retina. There may be slight stinging during the treatment, and the vision is blurry in the eye for several hours, especially due to the dilation of the pupil. These laser treatments can reduce the risk of vision loss by up to fifty percent and can, in some cases, even lead to an improvement in vision. Also, there are now new eye medications and new uses of familiar medicines that can help to reduce retinal swelling from diabetes.

For situations where there is an abnormal growth of new blood vessels, it is possible to do a sight saving laser treatment called pan-retinal photocoagulation or PRP. With PRP, the surgeon uses laser to destroy oxygen-deprived retinal tissue outside of the patient's central vision. While this creates blind spots in the peripheral vision, PRP prevents the continued growth of the fragile vessels and seals the leaking ones. The goal of the treatment is to arrest the progression of the disease.

For cases where abnormal blood vessels bleed and cause persistent visual loss due to blockage of the light from blood in the vitreous cavity of the eye there is an operation. Vitrectomy, done as an outpatient in a sterile operating room, removes the blood-clouded vitreous and replaces it with saline solution. The vitreous is mostly water anyway, so the patient notices no change between saline solution and the original gel.

Some diabetic patients are candidates for pancreas transplant or kidney-pancreas transplant. Although that treatment is not generally recommended to improve vision, one excellent side effect of a kidney-transplant often is the resolution of diabetic retinopathy.

Epstein established and is in practice at the Mercy Center for Corrective Eye Surgery in McHenry. He established the Lake-McHenry chapter of the American Diabetes Association and also the first eye laser treatment center in Lake or McHenry County.